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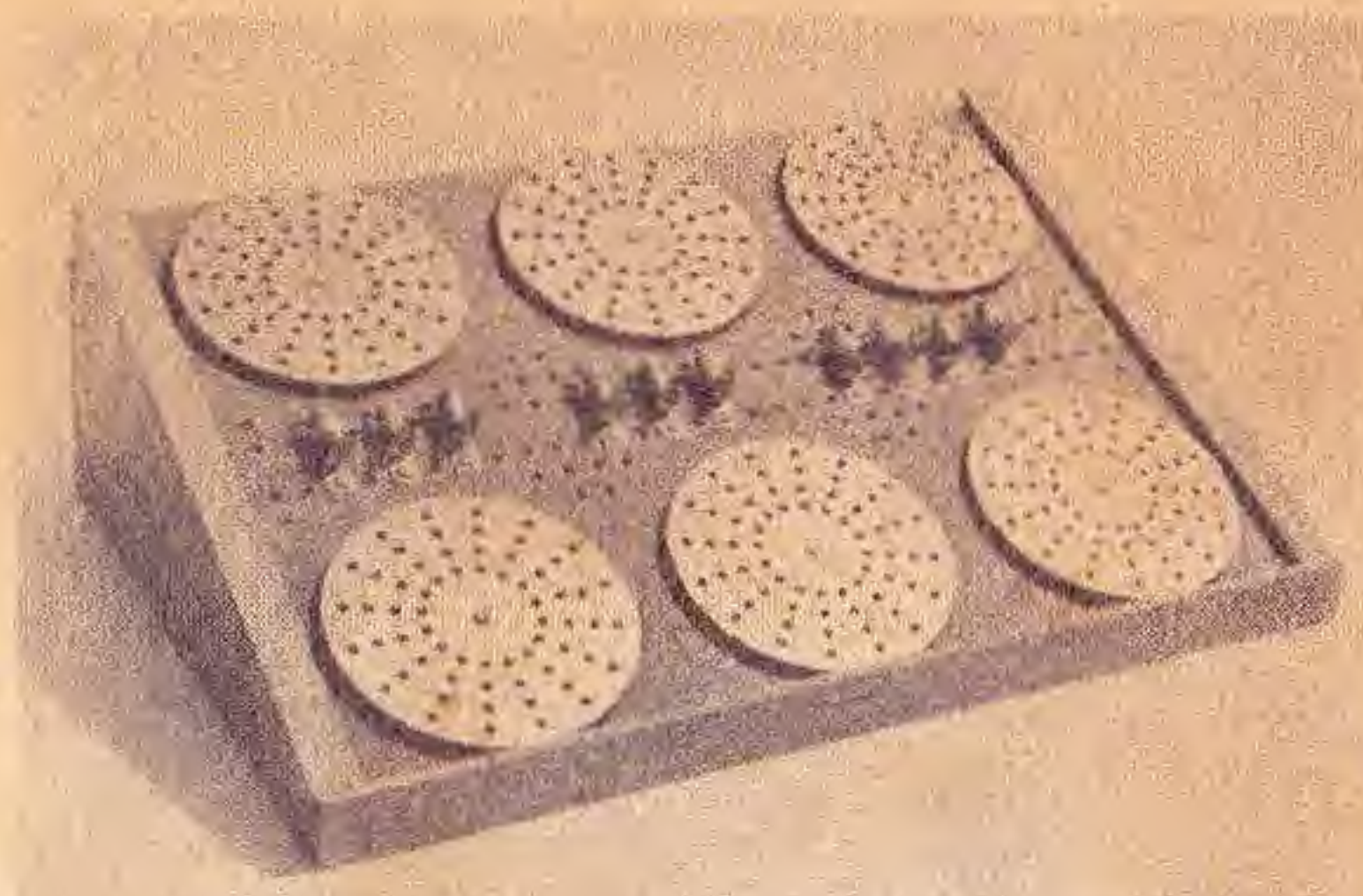
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# THE RICHEST PLANET

THREE years ago, an editorial based on *The Amazing Amazon* by Willard Price (John Day) seemed about to cause a mass migration by refuting the argument that Earth — gutted, overcrowded — should be abandoned for other planets. But authors have been falling back into the easy falsehood of a poor, jammed Earth. Jarring them with more of Price's astonishing statistics might not be a bad idea.

In size and phenomena, the Amazon River is cosmic enough to belong to science fiction rather than fact. Here, listen:

The mouth of the river is 200 miles wide — ten times as wide as the English Channel, twice as wide as the Mediterranean. Even a fast airliner takes half an hour to cross it.

This "moving sea," as Willard Price rightly calls it, represents *one-fifth of all the running fresh water on Earth!*

"Place the mouth of the Amazon at New York," states Price, "and its arms would reach up into Canada and down into Mexico and almost to California." With its 1100 known tributaries, many of them larger than the Rhine, it drains 3,000,000 square miles — an area nearly as huge as the entire U.S.A.

This most gigantic of rivers

even has a tide, a monstrous wave known as the *pororoca*, ten to 15 feet high, which races up as far as Santarém once a month at the murderous rate of 45 miles an hour.

One of the three large islands at the mouth of the river, Marajó, is as big as Denmark or Switzerland!

A hundred miles offshore, a ship can drop buckets and bring up drinkable water, for the 60 billion gallons per hour sweep out with such force that the Amazon goes on flowing right in the ocean itself.

The League of Nations estimated that Brazil could accommodate 900 million people. But agricultural and industrial productivity have increased so greatly since then that this figure could easily be enlarged by 25 to 50% — about half the present population of Earth!

Amazonia is so unthinkably rich in natural resources that it could give its citizens the most lavish economy in history — with enough left over to fuel and feed the machines, factories and people of the world.

Here are the greatest deposits of high-grade iron ore on all Earth, plus industrial diamonds, gold, manganese and just about

(Continued on Page 6)



(Continued from Page 5)

every other metal and mineral. Geologists declare that half of Brazil floats on oil. Nowhere on this planet is there deeper, blacker topsoil.

"The great forests of Canada and Russia are thin compared with those of Brazil," says Price, "and they take 400 years to grow. An Amazon forest rises to full stature in one-eighth of that time . . . and provides food, drink, rubber, belting, industrial oils, ropes and fibers, wax, chewing gum, insulation, bedding, insecticides, medicines, button, dyes and hundreds of other articles of daily use."

We think of Argentina as a great cattle country. But Brazil has 40 million head as against Argentina's 32 million and can support 75 million — more than any other land.

Brazil supplies 98.2% of all quartz crystal, essential in the building of precision instruments; beryllium and tantalum, over 80%. Zirconium comes only from Brazil. There are plentiful deposits of chrome, nickel, cobalt.

"If the supply of the vital metal, manganese, is cut off from Russia and India," the author assures us, "the western hemisphere's only source would be Amazonia . . . there's lots of it."

I mentioned iron deposits; the actual figure is nearly a third of

the world's iron reserves.

Sharks, tarpons, sawfishes, swordfishes, porpoises and manatees thrive in the Amazon. So do over 1800 species, compared with the 150 of all the rivers of Europe, and more than the whole Atlantic from pole to pole.

"Amazon fish," Price says, "are of such gigantic size that one fish will fill an unconscionable number of cans . . . The day seems to be coming when the Amazon will surpass Alaskan and North American rivers in canned fish and fish by-products."

There's just too much data in *The Amazing Amazon* — it spills, it gushes, it pours with a flood of richness matched only by the Amazon itself. You can't dip into the book; you'll find yourself thrashing through it, demanding impatiently, "Let's go! What are we waiting for?"

Aim for the planets and stars? Of course. But the colonization of Amazonia is possible the minute we clear out the animals and insects — and we have the means to do it now — and no giant spaceships with small payloads are needed, no sealed domes or oxygen and water extractors, refrigeration or heating units of awesome capacity.

Amazonia is right here and it makes Earth the richest planet in the Solar System!

— H. L. GOLD



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# WOLFBANE

BEGINNING A 2-PART SERIAL

By FREDERIK POHL and C. M. KORNBLUTH

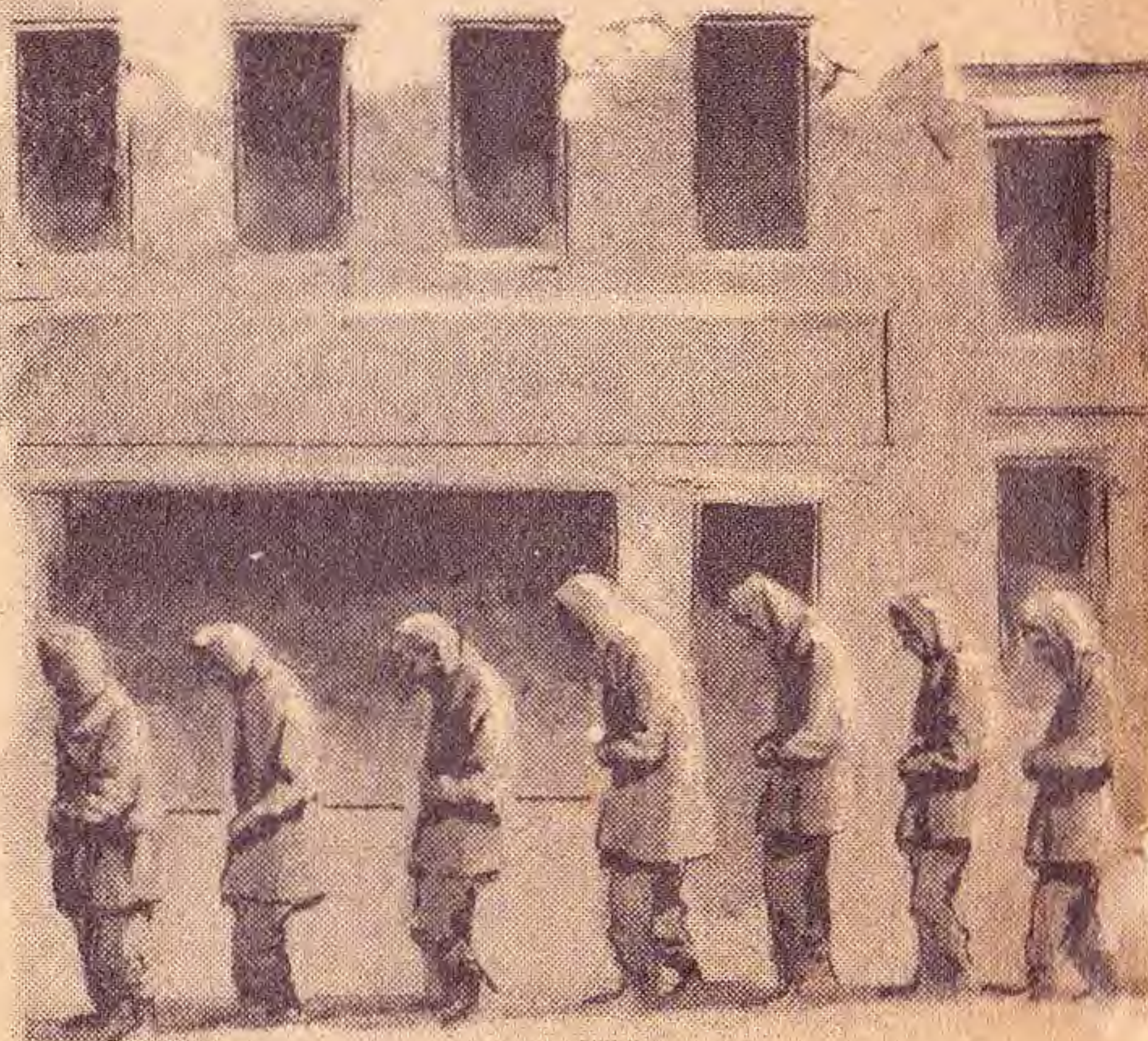
*Appallingly, the Earth and the Moon had been kidnapped from the Solar System — but who were the kidnappers and what ransom did they want?*

Illustrated by WOOD

## I

**R**OGET Germyn, banker, of Wheeling, West Virginia, a Citizen, woke gently from a Citizen's dreamless sleep. It was the third-hour-rising time, the time proper to a day of exceptional opportunity to appreciate.

Citizen Germyn dressed himself in the clothes proper for the appreciation of great works—such as viewing the Empire State ruins against storm clouds from a small boat, or walking in silent single file across the remaining course of the Golden Gate Bridge. Or as today—one hoped—witnessing the Re-creation of the Sun.









Germyn with difficulty retained a Citizen's necessary calm. One was tempted to meditate on improper things: Would the Sun be re-created? What if it were not?

He put his mind to his dress. First of all, he put on an old and storied bracelet, a veritable identity bracelet of heavy silver links and a plate which was inscribed:

**PFC JOE HARTMANN**

*Korea*  
**1953**

His fellow jewelry-appreciators would have envied him that bracelet—if they had been capable of such an emotion as envy. No other ID bracelet as much as two hundred and fifty years old was known to exist in Wheeling.

His finest shirt and pair of light pants went next to his skin, and over them he wore a loose parka whose seams had been carefully weakened. When the Sun was re-created, every five years or so, it was the custom to remove the parka gravely and rend it with the prescribed graceful gestures . . . but not so drastically that it could not be stitched together again. Hence the weakened seams.

This was, he counted, the forty-first day on which he and all of Wheeling had donned the appropriate Sun Re-creation clothing. It was the forty-first day on

which the Sun — no longer white, no longer blazing yellow, no longer even bright red — had risen and displayed a color that was darker maroon and always darker.

**I**T had, thought Citizen Germyn, never grown so dark and so cold in all of his life. Perhaps it was an occasion for special viewing. For surely it would never come again, this opportunity to see the old Sun so near to death . . .

One hoped.

Gravely, Citizen Germyn completed his dressing, thinking only of the act of dressing itself. It was by no means his specialty, but he considered, when it was done, that he had done it well, in the traditional flowing gestures, with no flailing, at all times balanced lightly on the ball of the foot. It was all the more perfectly consummated because no one saw it but himself.

He woke his wife gently, by placing the palm of his hand on her forehead as she lay neatly, in the prescribed fashion, on the Woman's Third of the bed.

The warmth of his hand gradually penetrated the layers of sleep. Her eyes demurely opened.

"Citizeness Germyn," he greeted her, making the assurance-of-identity sign with his left hand.

"Citizen Germyn," she said,



with the assurance-of-identity inclination of the head which was prescribed when the hands are covered.

He retired to his tiny study.

It was the time appropriate to meditation on the properties of Connectivity. Citizen Germyn was skilled in meditation, even for a banker; it was a grace in which he had schooled himself since earliest childhood.

Citizen Germyn, his young face composed, his slim body erect as he sat but in no way tense or straining, successfully blanked out, one after another, all of the external sounds and sights and feelings that interfered with proper meditation. His mind was very nearly vacant except of one central problem: Connectivity.

Over his head and behind, out of sight, the cold air of the room seemed to thicken and form a — call it a blob; a blob of air.

There was a name for those blobs of air. They had been seen before. They were a known fact of existence in Wheeling and in all the world. They came. They hovered. And they went away — sometimes not alone. If someone had been in the room with Citizen Germyn to look at it, he would have seen a distortion, a twisting of what was behind the blob, like flawed glass, a lens, like an eye. And they were called Eye.

Germyn meditated.

The blob of air grew and slowly moved. A vagrant current that spun out from it caught a fragment of paper and whirled it to the floor. Germyn stirred. The blob retreated.

Germyn, all unaware, disciplined his thoughts to disregard the interruption, to return to the central problem of Connectivity. The blob hovered . . .

From the other room, his wife's small, thrice-repeated throat-clearing signaled to him that she was dressed. Germyn got up to go to her, his mind returning to the world; and the overhead Eye spun relentlessly, and disappeared.

SOME miles east of Wheeling, Glenn Tropile — of a class which found it wisest to give itself no special name, and which had devoted much time and thought to shaking the unwelcome name it had been given — awoke on the couch of his apartment.

He sat up, shivering. It was cold. The damned Sun was still bloody dark outside the window and the apartment was soggy and chilled.

He had kicked off the blankets in his sleep. *Why couldn't* he learn to sleep quietly, like anybody else? Lacking a robe, he clutched the blankets around him,



got up and walked to the unglassed window.

It was not unusual for Glenn Tropile to wake up on his couch. This happened because Gala Tropile had a temper, was inclined to exile him from her bed after a quarrel, and — the operative factor — he knew he always had the advantage over her for the whole day following the night's exile. Therefore the quarrel was worth it. An advantage was, by definition, worth anything you paid for it or else it was no advantage.

He could hear her moving about in one of the other rooms and cocked an ear, satisfied. She hadn't waked him. Therefore she was about to make amends. A little itch in his spine or his brain — it was not a physical itch, so he couldn't locate it; he could only be sure that it was there—stopped troubling him momentarily; he was winning a contest. It was Glenn Tropile's nature to win contests . . . and his nature to create them.

Gala Tropile, young, dark, attractive, with a haunted look, came in tentatively carrying coffee from some secret hoard of hers.

Glenn Tropile affected not to notice. He stared coldly out at the cold landscape. The sea, white with thin ice, was nearly out of sight, so far had it retreated as the little sun waned.

"Glenn —" ~

Ah, good! *Glenn*. Where was the proper mode of first-greeting-one's-husband? Where was the prescribed throat-clearing upon entering a room?

Assiduously, he had untaught her the meticulous ritual of manners that they had all of them been brought up to know; and it was the greatest of his many victories over her that sometimes, now, *she* was the aggressor, *she* would be the first to depart from the formal behavior prescribed for Citizens.

Depravity! Perversion!

Sometimes they would touch each other at times which were not the appropriate coming-together times, Gala sitting on her husband's lap in the late evening, perhaps, or Tropile kissing her awake in the morning. Sometimes he would force her to let him watch her dress — no, not now, for the cold of the waning sun made that sort of frolic unattractive, but she had permitted it before; and such was his mastery over her that he knew she would permit it again, when the Sun was re-created . . .

If, a thought came to him, *if* the Sun was re-created.

**H**E turned away from the cold outside and looked at his wife. "Good morning, darling." She was contrite.



He demanded jarringly: "Is it?" Deliberately he stretched, deliberately he yawned, deliberately he scratched his chest. Every movement was ugly. Gala Tropile quivered, but said nothing.

Tropile flung himself on the better of the two chairs, one hairy leg protruding from under the wrapped blankets. His wife was on her best behavior — in his unique terms; she didn't avert her eyes.

"What've you got there?" he asked. "Coffee?"

"Yes, dear. I thought —"

"Where'd you get it?"

The haunted eyes looked away. Still better, thought Glenn Tropile, more satisfied even than usual; she's been ransacking an old warehouse again. It was a trick he had taught her, and like all of the illicit tricks she had learned from him, a handy weapon when he chose to use it.

It was not prescribed that a Citizen should rummage through Old Places. A Citizen did his work, whatever that work might be — banker, baker or furniture repairman. He received what rewards were his due for the work he did. A Citizen *never* took anything that was not his due — not even if it lay abandoned and rotting.

It was one of the differences between Glenn Tropile and the people he moved among.

I've got it made, he exulted; it was what I needed to clinch my victory over her.

He spoke: "I need you more than I need coffee, Gala."

She looked up, troubled.

"What would I do," he demanded, "if a beam fell on you one day while you were scrambling through the fancy groceries? How can you take such chances? Don't you *know* what you mean to me?"

She sniffed a couple of times. She said brokenly: "Darling, about last night — I'm sorry —" and miserably held out the cup. He took it and set it down. He took her hand, looked up at her, and kissed it lingeringly. He felt her tremble. Then she gave him a wild, adoring look and flung herself into his arms.

A new dominance cycle was begun at the moment he returned her frantic kisses.

Glenn knew, and Gala knew, that he had over her an edge, an advantage — the weather gauge, initiative of fire, percentage, the can't-lose lack of tension. Call it anything, but it was life itself to such as Glenn Tropile. He knew, and she knew, that having the advantage he would press it and she would yield — on and on, in a rising spiral.

He did it because it was his life, the attaining of an advantage over anyone he might en-



counter; because he was (unwelcomely but justly) called a Son of the Wolf.

A WORLD away, a Pyramid squatted sullenly on the planed-off top of the highest peak of the Himalayas.

It had not been built there. It had not been carried there by Man or Man's machines. It had — come, in its own time; for its own reasons.

Did it wake on that day, the thing atop Mount Everest, or did it ever sleep? Nobody knew. It stood, or sat, there, approximately a tetrahedron. Its appearance was known: constructed on a base line of some thirty-five yards, slaggy, midnight-blue in color. Almost nothing else about it was known — at least, to mankind.

It was the only one of its kind on Earth, though men thought (without much sure knowledge) that there were more, perhaps many thousands more, like it on the unfamiliar planet that was Earth's binary, swinging around the miniature Sun that hung at their common center of gravity like an unbalanced dumbbell. But men knew very little about that planet itself, only that it had come out of space and was now there.

Time was when men had tried to label that binary, more than

two centuries before, when it had first appeared. "Runaway Planet." "The Invader." "Rejoice in Messiah, the Day Is at Hand." The labels were sense-free; they were Xs in an equation, signifying only that there was *something* there which was unknown.

"The Runaway Planet" stopped running when it closed on Earth.

"The Invader" didn't invade; it merely sent down one slaggy, midnight-blue tetrahedron to Everest.

And "Rejoice in Messiah" stole Earth from its sun — with Earth's old moon, which it converted into a miniature sun of its own.

That was the time when men were plentiful and strong — or thought they were — with many huge cities and countless powerful machines. It didn't matter. The new binary planet showed no interest in the cities or the machines.

There was a plague of things like Eyes — dust-devils without dust, motionless air that suddenly tensed and quivered into lenticular shapes. They came with the planet and the Pyramid, so that there probably was some connection. But there was nothing to do about the Eyes. Striking at them was like striking at air — was the same thing, in fact.

While the men and machines tried uselessly to do something



about it, the new binary system — the stranger planet and Earth — began to move, accelerating very slowly.

But accelerating.

In a week, astronomers knew something was happening. In a month, the Moon sprang into flame and became a new sun — beginning to be needed, for already the parent Sol was visibly more distant, and in a few years it was only one other star among many.

**W**HEN the little sun was burned to a clinker, they — whoever “they” were, for men saw only the one Pyramid — would hang a new one in the sky. It happened every five clock-years, more or less. It was the same old moon-turned-sun, but it burned out, and the fires needed to be rekindled.

The first of these suns had looked down on an Earthly population of ten billion. As the sequence of suns waxed and waned, there were changes, climatic fluctuation, all but immeasurable differences in the quantity and kind of radiation from the new source.

The changes were such that the forty-fifth such sun looked down on a shrinking human race that could not muster up a hundred million.

A frustrated man drives in-

ward; it is the same with a race. The hundred million that clung to existence were not the same as the bold, vital ten billion.

The thing on Everest had, in its time, received many labels, too: The Devil, The Friend, The Beast, A Pseudo-living Entity of Quite Unknown Electrochemical Properties.

All these labels were also Xs.

If it did wake that morning, it did not open its eyes, for it had no eyes — apart from the quivers of air that might or might not belong to it. Eyes might have been gouged; therefore it had none. So an illogical person might have argued — and yet it was tempting to apply the “purpose, not function” fallacy to it. Limbs could be crushed; it had no limbs. Ears could be deafened; it had none. Through a mouth, it might be poisoned; it had no mouth. Intentions and actions could be frustrated; apparently it had neither.

It was there. That was all.

It and others like it had stolen the Earth and the Earth did not know why. It was there. And the one thing on Earth you could not do was hurt it, influence it, or coerce it in any way whatever.

It was there — and it, or the masters it represented, owned the Earth by right of theft. Utterly. Beyond human hope of challenge or redress.



## II

**C**ITIZEN and Citizeness Roget Germyn walked down Pine Street in the chill and dusk of — one hoped — a Sun Re-creation Morning.

It was the convention to pretend that this was a morning like any other morning. It was not proper either to cast frequent hopeful glances at the sky, nor yet to seem disturbed or afraid because this was, after all, the forty-first such morning since those whose specialty was Sky Viewing had come to believe the Re-creation of the Sun was near.

The Citizen and his Citizeness exchanged the assurance-of-identity sign with a few old friends and stopped to converse. This also was a convention of skill divorced from purpose. The conversation was without relevance to anything that any one of the participants might know, or think, or wish to ask.

Germyn said for his friends a twenty-word poem he had made in honor of the occasion and heard their responses. They did line-capping for a while — until somebody indicated unhappiness and a wish to change by frowning the Two Grooves between his brows. The game was deftly ended with an improvised rhymed exchange.

Casually, Citizen Germyn

glanced aloft. The sky-change had not begun yet; the dying old Sun hung just over the horizon, east and south, much more south than east. It was an ugly thought, but suppose, thought Germyn, just suppose that the Sun were not re-created today? Or tomorrow. Or —

Or ever.

The Citizen got a grip on himself and told his wife: "We shall dine at the oatmeal stall."

The Citizeness did not immediately reply. When Germyn glanced at her with well-masked surprise, he found her almost staring down the dim street at a Citizen who moved almost in a stride, almost swinging his arms. Scarcely graceful.

"That might be more Wolf than man," she said doubtfully.

Germyn knew the fellow. Tropile was his name. One of those curious few who made their homes outside of Wheeling, though they were not farmers. Germyn had had banking dealings with him — or would have had, if it had been up to Tropile.

"That is a careless man," he decided, "and an ill-bred one."

They moved toward the oatmeal stall with the gait of Citizens, arms limp, feet scarcely lifted, slumped forward a little. It was the ancient gait of fifteen hundred calories per day, not one of which could be squandered.



THERE was a need for more calories. So many for walking, so many for gathering food. So many for the economical pleasures of the Citizens, so many more — oh, many more, these days! — to keep out the cold. Yet there were no more calories; the diet the whole world lived on was a bare subsistence diet.

It was impossible to farm well when half the world's land was part of the time drowned in the rising sea, part of the time smothered in falling snow.

Citizens knew this and, knowing, did not struggle — it was ungraceful to struggle, particularly when one could not win. Only — well, Wolves struggled, wasting calories, lacking grace.

Citizen Germyn turned his mind to more pleasant things.

He allowed himself his First Foretaste of the oatmeal. It would be warm in the bowl, hot in the throat, a comfort in the belly. There was a great deal of pleasure there, in weather like this, when the cold plucked through the loosened seams and the wind came up the sides of the hills. Not that there wasn't pleasure in the cold itself, for that matter. It was proper that one should be cold now, just before the re-creation of the Sun, when the old Sun was smoky-red and the new one not yet kindled.

"— still looks like Wolf to me," his wife was muttering.

"Cadence," Germyn reproved his Citizeness, but took the sting out of it with a Quirked Smile.

The man with the ugly manners was standing at the very bar of the oatmeal stall where they were heading. In the gloom of mid-morning, he was all angles and strained lines. His head was turned awkwardly on his shoulder, peering toward the back of the stall where the vendor was rhythmically measuring grain into a pot. His hands were resting helter-skelter on the counter, not hanging by his sides.

Citizen Germyn felt a faint shudder from his wife. But he did not reprove her again, for who could blame her? The exhibition was revolting.

She said faintly: "Citizen, might we dine on bread this morning?"

He hesitated and glanced again at the ugly man. He said indulgently, knowing that he was indulgent: "On Sun Re-creation Morning, the Citizeness may dine on bread." Bearing in mind the occasion, it was only a small favor and therefore a very proper one.

The bread was good, very good. They shared out the half-kilo between them and ate it in silence, as it deserved. Germyn finished his first portion and, in the prescribed pause before be-



ginning his second, elected to refresh his eyes upward.

He nodded to his wife and stepped outside.

**O**VERHEAD, the Old Sun parceled out its last barrel-scrapings of heat. It was larger than the stars around it, but many of them were nearly as bright.

A high-pitched male voice said: "Citizen Germyn, good morning."

Germyn was caught off balance. He took his eyes off the sky, half turned, glanced at the face of the person who had spoken to him, raised his hand in the assurance-of-identity sign. It was all very quick and fluid — almost too quick, for he had had his fingers bent nearly into the sign for female friends and this was a man. Citizen Boyne. Germyn knew him well; they had shared the Ice Viewing at Niagara a year before.

Germyn recovered quickly enough, but it had been disconcerting.

He improvised swiftly: "There are stars, but are stars still there if there is no Sun?" It was a hurried effort, he grieved, but no doubt Boyne would pick it up and carry it along. Boyne had always been very good, very graceful.

Boyne did no such thing. "Good morning," he said again,

faintly. He glanced at the stars overhead, as though trying to unravel what Germyn was talking about. He said accusingly, his voice cracking sharply: "There isn't any Sun, Germyn. What do you think of that?"

Germyn swallowed. "Citizen, perhaps you —"

"No Sun, you hear me!" the man sobbed. "It's cold, Germyn. The Pyramids aren't going to give us another Sun, do you know that? They're going to starve us, freeze us; they're through with us. We're done, all of us!" He was nearly screaming.

All up and down Pine Street, people were trying not to look at him and some of them were failing.

Boyne clutched at Germyn helplessly. Revolted, Germyn drew back — *bodily contact!*

It seemed to bring the man to his senses. Reason returned to his eyes. He said: "I —" He stopped, stared about him. "I think I'll have bread for breakfast," he said foolishly, and plunged into the stall.

Boyne left behind him a shaken Citizen, caught halfway into the wrist-flip of parting, staring after him with jaw slack and eyes wide, as though Germyn had no manners, either.

All this on Sun Re-creation Day!

What could it mean? Germyn



wondered fretfully, worriedly.

Was Boyne on the point of —

Could Boyne be about to —

Germyn drew back from the thought. There was one thing that might explain Boyne's behavior. But it was not a proper speculation for one Citizen to make about another.

All the same — Germyn dared the thought — all the same, it *did* seem almost as though Citizen Boyne were on the point of — well, running amok.

**A**T the oatmeal stall, Glenn Tropile thumped on the counter. The laggard oatmeal vendor finally brought the ritual bowl of salt and the pitcher of thin milk. Tropile took his paper twist of salt from the top of the neatly arranged pile in the bowl. He glanced at the vendor. His fingers hesitated. Then, quickly, he ripped the twist of paper into his oatmeal and covered it to the permitted level with the milk.

He ate quickly and efficiently, watching the street outside.

They were wandering and mooning about, as always — maybe today more than most days, since they hoped it would be the day the Sun blossomed flame once more.

Tropile always thought of the wandering, mooning Citizens as *they*. There was a *we* somewhere for Tropile, no doubt, but Tro-

pile had not as yet located it, not even in the bonds of the marriage contract.

He was in no hurry. At the age of fourteen, Glenn Tropile had reluctantly come to realize certain things about himself — that he disliked being bested, that he had to have a certain advantage in all his dealings, or an intolerable itch of the mind drove him to discomfort. The things added up to a terrifying fear, gradually becoming knowledge, that the only *we* that could properly include him was one that it was not very wise to join.

He had realized, in fact, that he was a Wolf.

For some years, Tropile had struggled against it, for Wolf was an obscene word; the children he played with were punished severely for saying it, and for almost nothing else.

It was not *proper* for one Citizen to advantage himself at the expense of another; Wolves did that.

It was *proper* for a Citizen to accept what he had, not to strive for more, to find beauty in small things, to accommodate himself, with the minimum of strain and awkwardness, to whatever his life happened to be.

Wolves were not like that. Wolves never meditated, Wolves never Appreciated, Wolves never



were Translated — that supreme fulfillment, granted only to those who succeeded in a perfect meditation, that surrender of the world and the flesh by taking leave of both, which could never be achieved by a Wolf.

Accordingly, Glenn Tropile had tried very hard to do all the things that Wolves could not do.

He had nearly succeeded. His specialty, Water Watching, had been most rewarding. He had achieved many partly successful meditations on Connectivity.

And yet he was still a Wolf, for he still felt that burning, itching urge to triumph and to hold an advantage. For that reason, it was almost impossible for him to make friends among the Citizens; and gradually he had almost stopped trying.

Tropile had arrived in Wheeling nearly a year before, making him one of the early settlers in point of time. And yet there was not a Citizen in the street who was prepared to exchange recognition gestures with him.

He knew *them*, nearly every one. He knew their names and their wives' names. He knew what northern states they had moved down from with the spreading of the ice, as the sun grew dim. He knew very nearly to the quarter of a gram what stores of sugar and salt and coffee each one of them had put away — for their

guests, of course, not for themselves; the well-bred Citizen hoarded only for the entertainment of others.

Tropile knew these things because there was an advantage in knowing them. But there was no advantage in having anyone know him.

A few did — that banker, Germyn; Tropile had approached him only a few months before about a prospective loan. But it had been a chancy, nervous encounter. The idea was so luminously simple to Tropile—organize an expedition to the coal mines that once had flourished nearby, find the coal, bring it to Wheeling, heat the houses. And yet it had seemed blasphemous to Germyn. Tropile had counted himself lucky merely to have been refused the loan, instead of being cried out upon as Wolf.

**T**HE oatmeal vendor was fussing worriedly around his neat stack of paper twists in the salt bowl.

Tropile avoided the man's eyes. Tropile was not interested in the little wry smile of self-deprecation which the vendor would make to him, given half a chance. Tropile knew well enough what was disturbing the vendor. Let it disturb him. It was Tropile's custom to take extra twists of salt. They were in his pockets



now; they would stay there. Let the vendor wonder why he was short.

Tropile licked the bowl of his spoon and stepped into the street. He was comfortably aware under a double-thick parka that the wind was blowing very cold.

A Citizen passed him, walking alone: odd, thought Tropile. He was walking rapidly and there was a look of taut despair on his face. Still more odd. Odd enough to be worth another look, because that sort of haste, that sort of abstraction, suggested something to Tropile. They were in no way normal to the gentle sheep of the class *They*, except in one particular circumstance.

Glenn Tropile crossed the street to follow the abstracted Citizen, whose name, he knew, was Boyne. The man blundered into Citizen Germyn outside the baker's stall, and Tropile stood back out of easy sight, watching and listening.

Boyne was on the ragged edge of breakdown. What Tropile heard and saw confirmed his diagnosis. The one particular circumstance was close to happening — Citizen Boyne was on the verge of running amok.

Tropile looked at the man with amusement and contempt. Amok! The gentle sheep *could* be pushed too far. He had seen Citizens run amok, the signs were obvious.

There was pretty sure to be an advantage in it for Glenn Tropile. There was an advantage in almost anything, if you looked for it.

He watched and waited. He picked his spot with care, so that he could see Citizen Boyne inside the baker's stall, making a dismal botch of slashing his quarter-kilo of bread from the Morning Loaf.

He waited for Boyne to come racing out . . .

Boyne did.

A yell — loud, piercing. It was Citizen Germyn, shrilling: "Amok, amok!" A scream. An enraged wordless cry from Boyne, and the baker's knife glinting in the faint light as Boyne swung it. And then Citizens were scattering in every direction — all of the Citizens but one.

One Citizen was under the knife—his own knife, as it happened; it was the baker himself. Boyne chopped and chopped again. And then Boyne came out, roaring, the broad knife whistling about his head. The gentle Citizens fled panicked before him. He struck at their retreating forms and screamed and struck again. Amok.

It was the one particular circumstance when they forgot to be gracious—one of the two, Tropile corrected himself as he strolled across to the baker's stall.



His brow furrowed, because there was another circumstance when they lacked grace, and one which affected him nearly.

**H**E watched the maddened creature, Boyne, already far down the road, chasing a knot of Citizens around a corner. Tropile sighed and stepped into the baker's stall to see what he might gain from this.

Boyne would wear himself out—the surging rage would leave him as quickly as it came; he would be a sheep again and the other sheep would close in and capture him. That was what happened when a Citizen ran amok. It was a measure of what pressures were on the Citizens that, at any moment, there might be one gram of pressure too much and one of them would crack. It had happened here in Wheeling twice within the past two months. Glenn Tropile had seen it happen in Pittsburgh, Altoona and Bronxville.

There is a limit to the pressure that can be endured.

Tropile walked into the baker's stall and looked down without emotion at the slaughtered baker. The corpse was a gory mess, but Tropile had seen corpses before.

He looked around the stall, calculating. As a starter, he bent to pick up the quarter-kilo of bread Boyne had dropped, dusted it off

and slipped it into his pocket. Food was always useful. Given enough food, perhaps Boyne would not have run amok.

Was it simple hunger they cracked under? Or the knowledge of the thing on Mount Everest, or the hovering Eyes, or the sought-after-dreaded prospect of Translation, or merely the strain of keeping up their laboriously figured lives?

Did it matter? *They* cracked and ran amok, and Tropile never would, and that was what mattered.

He leaned across the counter, reaching for what was left of the Morning Loaf—

And found himself staring into the terrified large eyes of Citizeness Germyn.

She screamed: "Wolf! Citizens, help me! Wolf!"

Tropile faltered. He hadn't even seen the damned woman, but there she was, rising up from behind the counter, screaming her head off: "Wolf! Wolf!"

He said sharply: "Citizeness, I beg you—" But that was no good. The evidence was on him and her screams would fetch others.

Tropile panicked. He started toward her to silence her, but that was no good, either. He whirled. She was screaming, screaming, and there were people to hear. Tropile darted into the street, but they were popping out of



every doorway now, appearing from each rat's hole in which they had hid to escape Boyne.

"Please!" he cried, sobbing. "Wait a minute!"

But they weren't waiting. They had heard the woman and maybe some of them had seen him with the bread. They were all around him—no, they were all over him; they were clutching at him, tearing at his soft, warm furs.

They pulled at his pockets and the stolen twists of salt spilled accusingly out. They yanked at his sleeves and even the stout, unweakened seams ripped open. He was fairly captured.

"Wolf!" they were shouting. "Wolf!" It drowned out the distant noise from where Boyne had finally been run to earth, a block and more away. It drowned out everything.

It was the other circumstance when *they* forgot to be gracious: when they had trapped a Son of the Wolf.

### III

**E**NGINEERING had long ago come to an end.

Engineering is possible under one condition of the equation: Total available Calories divided by Population equals Artistic-Technological Style. When the ratio Calories-to-Population is large—say, five thousand or more,

five thousand daily calories for every living person—then the Artistic-Technological Style is *big*. People carve Mount Rushmore; they build great foundries; they manufacture enormous automobiles to carry one housewife half a mile for the purchase of one lipstick.

Life is coarse and rich where C:P is large. At the other extreme, where C:P is too small, life does not exist at all. It has starved out.

Experimentally, add little increments to C:P and it will be some time before the right-hand side of the equation becomes significant. But at last, in the 1,000 to 1,500 calorie range, Artistic-Technological Style firmly appears in self-perpetuating form. C:P in that range produces the small arts, the appreciations, the peaceful arrangements of necessities into subtle relationships of traditionally agreed-upon virtue.

Think of Japan, locked into its Shogunate prison, with a hungry population scrabbling food out of mountainsides and beauty out of arrangements of lichens. The small, inexpensive sub-sub-arts are characteristic of the 1,000 to 1,500 calorie range.

And this was the range of Earth, the world of ten billion men, when the planet was stolen by its new binary.

Some few persons inexpensive-



ly studied the study of science with pencil and renewable paper, but the last research accelerator had long since been shut down. The juice from its hydro-power dam was needed to supply meager light to a million homes and to cook the pablum for two million brand-new babies.

In those days, one dedicated Byzantine wrote the definitive encyclopedia of engineering (though he was no engineer). Its four hundred and twenty tiny volumes examined exhaustively the engineering feats of ancient Greece and Egypt, the Wall of Shih-Hwang Ti, the Gothic builders, Brunel who changed the face of England, the Roeblings of Brooklyn, Groves of the Pentagon, Duggan of the Shelter System (before C:P dropped to the point where war became vanishingly implausible), Levern of Operation Up. But the encyclopedist could not use a slide rule without thinking, faltering, jotting down his decimals.

And then . . . the magnitudes grew less.

Under the tectonic and climatic battering of the great abduction of Earth from its primary, under the sine-wave advances to and retreats from the equator of the ice sheath, as the small successor Suns waxed, waned, died and were replaced, the ratio C:P remained stable. C had diminished

enormously; so had P. As the calories to support life grew scarce, so the consuming mouths of mankind grew less in number.

**T**HE forty-fifth small Sun shone on no engineers.

Not even on the binary, perhaps. The Pyramids, the things on the binary, the thing on Mount Everest—they were not engineers. They employed a crude metaphysic based on dissection and shoving.

They had no elegant field theories. All they knew was that everything came apart, and that if you pushed a thing, it would move.

If your biggest push would not move a thing, you took it apart and pushed the parts, and then it would move. Sometimes, for nuclear effects, they had to take things apart into  $3 \times 10^9$  pieces and shove each piece very carefully.

By taking apart and shoving, then, they landed their one spaceship on the burned-out sunlet. Four human beings were on that ship. They meditated briefly on Connectivity and died screaming.

A point of new flame appeared on the sunlet's surface and the spaceship scrambled for the binary. The point of flame went from cherry through orange into the blue-white and began to spread.



AT the moment of the Re-creation of the Sun, there was rejoicing on the Earth.

Not quite everywhere, though. In Wheeling's House of the Five Regulations, Glenn Tropile waited unquietly for death. Citizen Boyne, who had run amok and slaughtered the baker, shared Tropile's room and his doom, but not his rage. Boyne, with demure pleasure, was composing his death poem.

"Talk to me!" snapped Tropile. "Why are we here? What did you do and why did you do it? What have I done? Why don't I pick up a bench and kill you with it? You would've killed me two hours ago if I'd caught your eye!"

There was no satisfaction in Citizen Boyne; the passions were burned out of him. He politely tendered Tropile a famous aphorism: "Citizen, the art of living is the substitution of unimportant, answerable questions for important, unanswerable ones. Come, let us appreciate the new-born Sun."

He turned to the window, where the spark of blue-white flame in what had once been the crater of Tycho was beginning to spread across the charred moon.

Tropile was child enough of his culture to turn with him, almost involuntarily. He was silent.

That blue-white infinitesimal up there growing slowly—the oneness, the calm rapture of Being in a universe that you shaded into without harsh discontinua, the being one with the great blue-white gem-flower blossoming now in the heavens that were no different stuff than you yourself —

He closed his eyes, calm, and meditated on Connectivity.

He was being Good.

By the time the fusion reaction had covered the whole small disk of the sunlet, a quarter-hour at the most, his meditation began to wear off.

Tropile shrugged out of his torn parka, not bothering to rip it further. It was already growing warm in the room. Citizen Boyne, of course, was carefully opening every seam with graceful rending motions, miming great and smooth effort of the biceps and trapezius.

But the meditation was over, and as Tropile watched his cellmate, he screamed a silent *Why?* Since his adolescence, that wailing syllable had seldom been far from his mind. It could be silenced by appreciation and meditation.

Tropile's specialty was Water Watching and he was so good at it that several beginners had asked him for instruction in the subtle art, in spite of his notorious



oddities of life and manner. He enjoyed Water Watching. He almost pitied anybody so single-mindedly devoted to, say, Clouds and Odors—great game though it was—that he had never even tried Water Watching. And after a session of Watching, when one was lucky enough to observe the Nine Boiling Stages in classic perfection, one might slip into meditation and be harmonious, feel Good.

But what did one do when the meditations failed, as they had failed him? What did one do when they came farther and farther apart, became less and less intense, could be inspired, finally, only by a huge event like the renewal of the Sun?

One went amok, he had always thought.

But he had not. Boyne had. He had been declared a Son of the Wolf, on no evidence that he could understand. Yet he had not run amok.

Still, the penalties were the same, he thought, uncomfortably aware of an unfamiliar itch—not the inward intolerable itch of needing the advantage, but a localized sensation at the base of his spine. The penalties for all gross crimes—Wolfhood or running amok—were the same, and simply this:

They would perform the Lumbar Puncture. He would make

the Donation of Spinal Fluid. He would be dead.

THE Keeper of the House of Five Regulations, an old man, Citizen Harmane, looked in on his charges—approvingly at Boyne, with a beclouded expression at Glenn Tropile.

It was thought that even Wolves were entitled to the common human decencies in the brief interval between exposure and the Donation of Fluid. The Keeper would not have dreamed of scowling at the detected Wolf or of interfering with whatever wretched imitation of meditation-before-dying the creature might practice. But he could not, all the same, bring himself to offer even an assurance-of-identity gesture.

Tropile had no such qualms. He scowled at Keeper Harmane with such ferocity that the old man almost hurried away. He turned an almost equally ugly scowl upon Citizen Boyne. How dared that knife-murderer be so calm, so relaxed!

Tropile said brutally: "They'll kill us! You know that? They'll stick a needle in our spines and drain us dry. It *hurts*. Do you understand me? They're going to drain us, and then they're going to drink our spinal fluid, and it's going to *hurt*."

He was gently corrected. "We shall make the Donation," Citizen



Boyne said calmly. "Is not the difference intelligible to a Son of the Wolf?"

True culture demanded that that remark be accepted as a friendly joke, probably based on a truth—how else could an unpalatable truth be put in words? Otherwise the unthinkable might happen. They might quarrel. They might even come to blows!

The appropriate mild smile formed on Tropile's lips, but harshly he wiped it off. They were going to *kill* him. He would *not* smile for them! And the effort was enormous.

"I'm *not* a Son of the Wolf!" he howled, desperate, knowing he was protesting to the man of all men in Wheeling who didn't care, and who could do least about it if he did. "What's this crazy talk about Wolves? I don't know what a Son of the Wolf is and I don't think you or anybody does. All I know is that I was acting *sensibly*. And everybody began howling! You're supposed to know a Son of the Wolf by his unculture, his ignorance, his violence. But you chopped down three people and I only picked up a piece of bread! And I'm supposed to be the dangerous one!"

"Wolves never know they're Wolves," sighed Citizen Boyne. "Fish probably think they're birds and you evidently think

you're a Citizen. Would a Citizen speak as you are speaking?"

"But they're going to kill us!"

"Then why aren't you composing your death poem?"

GLENN Tropile took a deep breath. Something was biting him. It was bad enough that he was about to die, bad enough that he had done nothing worth dying for. But what was gnawing at him now had nothing to do with dying.

The percentages were going the wrong way. This pale Citizen was getting an edge on him.

An engorged gland in Tropile's adrenals—it was only a pinhead in Citizen Boyne's—gushed raw hormones into his bloodstream. He could die, yes—that was a skill everyone had to acquire, sooner or later. But while he was alive, he could not stand to be bested in an encounter, an argument, a relationship—not and stay alive. Wolf? Call him Wolf. Call him Operator, or Percentage Player; call him Sharp Article; call him Gamesman.

If there was an advantage to be derived, he would derive it. It was the way he was put together.

He said, for time: "You're right. Stupid of me. I must have lost my head!"

He thought. Some men think by poking problems apart; some think by laying facts side by side



to compare. Tropile's thinking was neither of these, but a species of judo. He conceded to his opponent such things as Strength, Armor, Resource. He didn't need these things for himself; to every contest, the opponent brought enough of them to supply two. It was Tropile's habit (and Wolfish, he had to admit) to use the opponent's strength against him, to break the opponent against his own steel walls.

He thought.

The first thing was to make up his mind: He was Wolf. Then let him *be* Wolf. He wouldn't stay around for the spinal tap; he would go from there. But how?

The second thing was to plan. There were obstacles. Citizen Boyne was one. The Keeper of the House of the Five Regulations was another.

Where was the pole which would permit him to vault over these hurdles? There was always his wife, Gala. He owned her; she would do what he wished—provided he made her *want* to do it.

Yes, Gala. He walked to the door and shouted to Citizen Harmane: "Keeper! I must see my wife! Have her brought to me!"

It was impossible for the Keeper to refuse. He called gently, "I will invite the Citizeness," and toddled away.

The third thing was time.

Tropile turned to Citizen Boyne. "Citizen," he said persuasively, "since your death poem is ready and mine is not, will you be gracious enough to go first when they—when they come?"

Citizen Boyne looked temperately at his cellmate and made the Quirked Smile.

"You see?" he said. "Wolf."

And that was true. But what was also true was that Boyne couldn't and didn't refuse.

#### IV

**H**ALF a world away, the midnight-blue Pyramid sat on its planed-off peak as it had sat since the days when Earth had a real sun of its own.

It was of no importance to the Pyramid that Glenn Tropile was about to receive a slim catheter into his spine, to drain his saps and his life. It didn't matter to the Pyramid that the pretext for the execution was an act which human history had long stopped considering a capital crime. Ritual sacrifice in any guise made no difference to the Pyramid.

The Pyramid saw them come and the Pyramid saw them go—if the Pyramid could be said to "see." One human being more or less, what matter? Who bothers to take a census of the cells in a hangnail?



And yet the Pyramid did have a kind of interest in Glenn Tropic. Or, at least, in the human race of which he was a part.

Nobody knew much about the Pyramids, but everybody knew *that* much. They wanted something—else why would they have bothered to steal the Earth?

The date of the theft was 2027. A great year—the year of the first landings on the Runaway Planet that had come blundering into the Solar System. Maybe those landings were a mistake — although they were a very great triumph, too; but maybe if it hadn't been for the landings, the Runaway Planet might have run right through the ecliptic and away.

However, the triumphal mistake was made and that was the first time a human eye saw a Pyramid.

Shortly after—though not before a radio message was sent—that human eye winked out forever; but by then the damage was done. What passed in a Pyramid for “attention” had been attracted. The next thing that happened set the wireless channels between Palomar and Pernambuco, between Greenwich and the Cape of Good Hope, buzzing and worrying, as astronomers all over the Earth reported and confirmed and reconfirmed the astonishing fact that our planet was on the move. Rejoice in Messiah had

come to take us away.

A world of ten billion people, some of them brilliant, many of them brave, built and flung the giant rockets of Operation Up at the invader: Nothing.

The first, and only, Interplanetary Expeditionary Force was boosted up to no-gravity and dropped onto the new planet to strike back: Nothing.

Earth moved spirally outward.

If a battle could not be won, then perhaps a migration. New ships were built in haste. But they lay there rusting as the sun grew small and the ice grew thick, because where was there to go? Not Mars. Not the Moon, which was trailing alone. Not choking Venus or crushing Jupiter.

The migration was defeated as surely as the war, there being no place to migrate to.

One Pyramid came to Earth, only one. It shaved the crest off the highest mountain there was and squatted on it. An observer? A warden? Whatever it was, it stayed.

The sun grew too distant to be of use, and out of the old Moon, the Pyramid aliens built a new small sun in the sky—a five-year sun that burned out and was replaced, again and again and endlessly again.

It had been a fierce struggle against unbeatable odds on the part of the ten billion; and when



the uselessness of struggle was demonstrated at last, many of the ten billion froze to death, and many of them starved, and nearly all of the rest had something frozen or starved out of them; and what was left, two centuries and more later, was more or less like Citizen Boyne, except for a few—a very few—like Glenn Tropile.

**G**ALA Tropile stared miserably at her husband. "I want to get out of here," he was saying urgently. "They mean to kill me. Gala, you know you can't make yourself suffer by letting them kill me!"

She wailed: "I *can't*!"

Tropile looked over his shoulder. Citizen Boyne was fingering the textured contrasts of a golden watch-case which had been his father's—and soon would be his son's. Boyne's eyes were closed and he wasn't listening.

Tropile leaned forward and deliberately put his hand on his wife's arm. She started and flushed, of course.

"You *can*," he said, "and what's more, you will. You can help me get out of here. I insist on it, Gala, because I must save you that pain."

He took his hand off her arm, content.

He said harshly: "Darling, don't you think I know how much

we've always meant to each other?"

She looked at him wretchedly. Fretfully she tore at the billowing filmy sleeve of her summer blouse. The seams hadn't been loosened; there had not been time. She had just been getting into the appropriate Sun Re-creation Day costume, to be worn under the parka, when the messenger had come with the news about her husband.

She avoided his eyes. "If you're really Wolf . . ."

Tropile's sub-adrenals pulsed and filled him with confident strength. "You know what I am—you better than anyone else." It was a sly reminder of their curious furtive behavior together; like the hand on her arm, it had its effect. "After all, why do we quarrel the way we did last night?"

He hurried on; the job of the rowel was to spur her to action, not to inflame a wound. "Because we're *important* to each other. I know that you would count on me to help if you were in trouble. And I know that you'd be hurt—*deeply*, Gala!—if I didn't count on you."

She sniffled and scuffed the bright strap over her open-toed sandal.

Then she met his eyes.

It was the after-effect of the argument, of course. Glenn Tro-



pile knew just how heavily he could rely on the after-spiral of a quarrel. She was submitting.

She glanced furtively at Citizen Boyne and lowered her voice.

"What do I have to do?" she whispered.

**I**N five minutes, she was gone, but that was more than enough time. Tropile had at least thirty minutes left. They would take Boyne first; he had seen to that. And once Boyne was gone—

Tropile wrenched a leg off his three-legged stool and sat precariously balanced on the other two. He tossed the loose leg clattering into a corner.

The Keeper of the House of Five Regulations ambled slack-bodied by and glanced into the room. "Wolf, what happened to your stool?"

Tropile made a left-handed sign of no-importance. "It doesn't matter. Except it is hard to meditate, sitting on this thing, with every muscle tensing and fighting against every other to keep my balance . . ."

The Keeper made an overruling sign of please-let-me-help. "It's your last half-hour, Wolf," he reminded Tropile. "I'll fix the stool for you."

He entered and slammed and banged it together, and left with an expression of mild concern. Even a Son of the Wolf was en-

titled to the fullest appreciation of that unique opportunity for meditation, the last half-hour before a Donation.

In five minutes, the Keeper was back, looking solemn and yet glad, like a bearer of serious but welcome tidings.

"It is the time for the first Donation," he announced. "Which of you—"

"Him," said Tropile quickly, pointing.

Boyne opened his eyes calmly and nodded. He got to his feet, made a formal leavetaking bow to Tropile, and followed the Keeper toward his Donation and his death. As they were going out, Tropile coughed a would-you-please-grant-me-a-favor cough.

The Keeper paused. "What is it, Wolf?"

Tropile showed him the empty water pitcher—empty, all right; he had emptied it out the window.

"My apologies," the Keeper said, flustered, and hurried Boyne along. He came back almost at once to fill the pitcher, even though he should be there to watch Boyne's ceremonial Donation.

Tropile stood looking at the Keeper, his sub-adrenals beginning to pound like the rolling boil of Well-aged Water. The Keeper was at a disadvantage. He had been neglectful of his charge—



a broken stool, no water in the pitcher. And a Citizen, brought up in a Citizen's maze of consideration and tact, could not help but be humiliated, seeking to make amends.

Tropile pressed his advantage home. "Wait," he said to the Keeper. "I'd like to talk to you."

The Keeper hesitated, torn. "The Donation—"

"Damn the Donation," Tropile said calmly. "After all, what is it but sticking a pipe into a man's backbone and sucking out the juice that keeps him alive? It's killing, that's all."

The Keeper turned literally white. Tropile was speaking blasphemy and he wasn't stopping.

"I want to tell you about my wife," Tropile went on, assuming a confidential air. "Now there's a real woman. Not one of these frozen-up Citizenesses, you know? Why, she and I used to—" He hesitated. "You're a man of the world, aren't you?" he demanded. "I mean you've seen life."

"I—suppose so," the Keeper said faintly.

"Then you won't be shocked," Tropile lied. "Well, let me tell you, there's a lot to women that these stuffed-shirt Citizens don't know about. Boy! Ever see a woman's knee?" He sniggered. "Ever kiss a woman with—" he winked—"with the *light on*? Ever sit in a big armchair, say, with a

woman in your *lap*—all soft and heavy, and kind of warm, and slumped up against your chest, you know, and—"

He stopped and swallowed. He was almost making himself retch, it was so hard to say these things. But he forced himself to go on: "Well, that's what she and I used to do. Plenty. All the time. That's what I call a real woman."

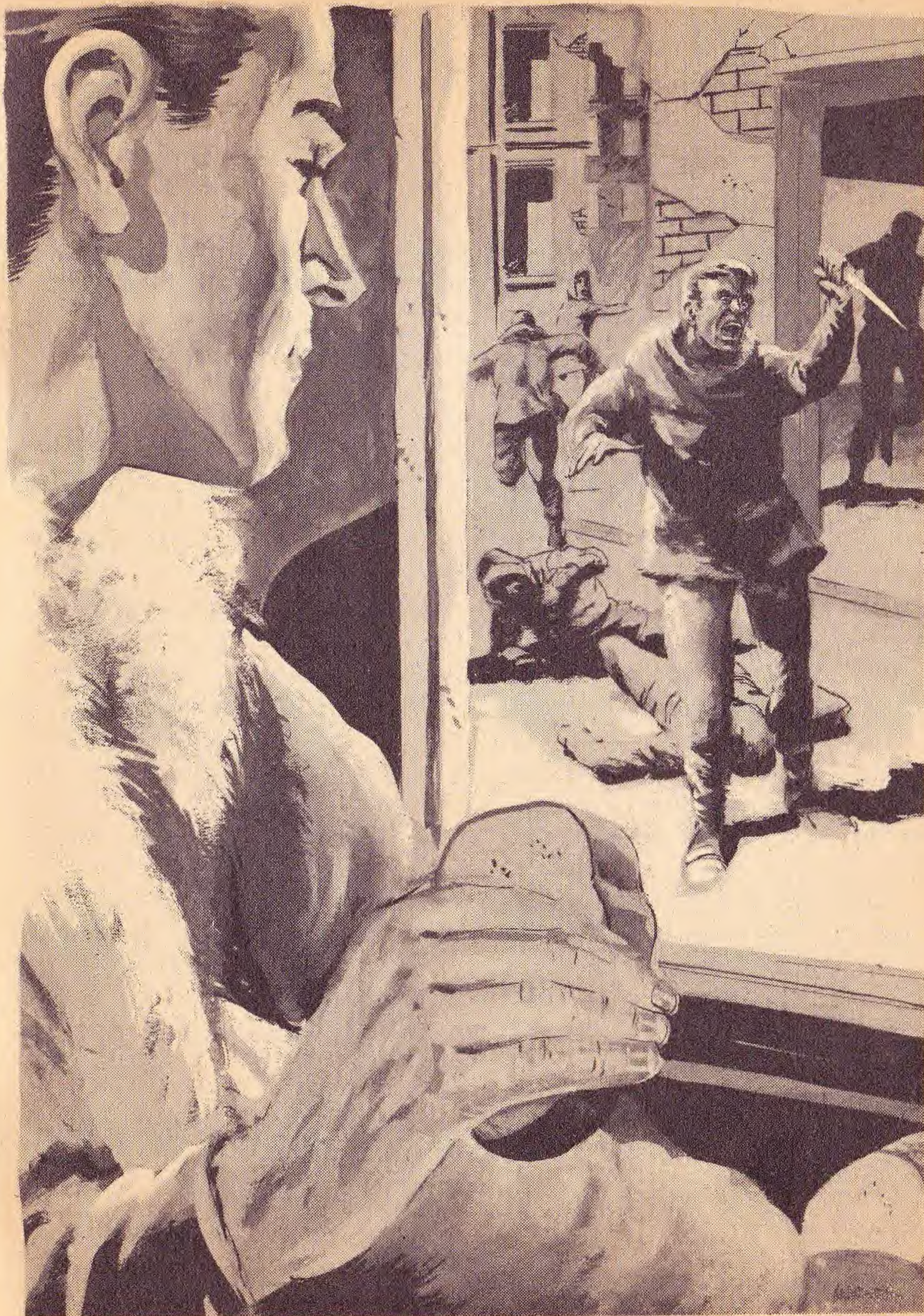
He stopped, warned by the Keeper's sudden change of expression, glazed eyes, strangling breath. He had gone too far. He had only wanted to paralyze the man, revolt him, put him out of commission, but he was overdoing it. He jumped forward and caught the Keeper as he fell, fainting.

**T**RROIPE callously emptied the water pitcher over the man. The Keeper sneezed and sat up groggily. He focused his eyes on Tropile and agonizedly blushed.

Tropile said harshly: "I wish to see the new sun from the street."

The request was incredible. Even after the unbelievable obscenities he had heard, the Keeper was not prepared for this; he was staggered. Tropile was in detention regarding the Fifth Regulation. That was all there was to it. Such persons were not to be released from their quarters. The







Keeper knew it, the world knew it, Tropile knew it.

It was an obscenity even greater than the lurid tales of perverted lust, for Tropile had asked something which was impossible! No one ever asked anything that was impossible to grant, for no one could ever refuse anything. That was utterly graceless, unthinkable.

One could only attempt to compromise. The Keeper stammeringly said: "May I—may I let you see the new sun from the corridor?" And even that was wretchedly wrong, but he had to offer something. One always offered something. The Keeper had never since babyhood given a flat no to anybody about anything. No Citizen had. A flat no led to anger, strong words—perhaps even hurt feelings. The only flat no conceivable was the enormous terminal no of an amok. Short of that —

One offered. One split the difference. One was invariably filled with tepid pleasure when, invariably, the offer was accepted, the difference was split, both parties were satisfied.

"That will do for a start," Tropile snarled. "Open, man, open! Don't make me wait."

The Keeper reeled and unlatched the door to the corridor.

"Now the street!"

"I can't!" burst in an anguished

cry from the Keeper. He buried his face in his hands and began to sob, hopelessly incapacitated.

"The street!" Tropile said remorselessly. He himself felt wrenchingly ill; he was going against custom that had ruled his own life as surely as the Keeper's.

But he was Wolf. "I *will* be Wolf," he growled, and advanced upon the Keeper. "My wife," he said, "I didn't finish telling you. Sometimes she used to put her arm around me and just snuggle up and—I remember one time she kissed my ear. Broad daylight. It felt funny and warm—I can't describe it."

Whimpering, the Keeper flung the keys at Tropile and tottered brokenly away.

He was out of the action. Tropile himself was nearly as badly off; the difference was that he continued to function. The words coming from him had seared like acid in his throat.

"They call me Wolf," he said aloud, reeling against the wall. "I will be one."

He unlocked the outer door and his wife was waiting, holding in her arms the things he had asked her to bring.

Tropile said strangely to her: "I am steel and fire. I am Wolf, full of the old moxie."

She wailed: "Glenn, are you sure I'm doing the right thing?"

He laughed unsteadily and led



her by the arm through the deserted streets.

## V

**CITIZEN** Germyn, as was his right by position and status as a connoisseur, helped prepare Citizen Boyne for his Donation. There was nothing much to it—which made it an elaborate and lengthy task, according to the ethic of the Citizens; it had to be protracted, each step being surrounded by fullest dress of ritual.

It was done in the broad daylight of the new Sun, and as many of the three hundred citizens of Wheeling as could manage it were in the courtyard of the old Federal Building to watch.

The nature of the ceremony was this: A man who revealed himself Wolf, or who finally crumbled under the demands of life and ran amok, could not be allowed to live. He was haled before an audience of his equals and permitted—with the help of regretful force, if that should be necessary, but preferably not—to make the Donation of Spinal Fluid.

Execution was murder and murder was not permitted under the gentle code of Citizens; this was not execution. The draining of a man's spinal fluid did not kill him. It only insured that,

after a time and with much suffering, his internal chemistry would so arrange itself that it would continue to function, only not in a way that would sustain life.

Once the Donation was made, the problem was completely altered, of course. Suffering was bad in itself. To save the Donor from the suffering that lay ahead, it was the custom to have the oldest and gentlest Citizen on hand stand by with a sharp-edged knife. When the Donation was complete, the Donor's head was removed—purely to avert suffering. That was not execution, either, but only the hastening of an inevitable end.

The dozen or so Citizens whose rank permitted them to assist then dissolved the spinal fluids in water and ceremoniously sipped them, at which time it was proper to offer a small poem in commentary. All in all, it was a perfectly splendid opportunity for the purest form of meditation for everyone concerned.

Citizen Germyn, whose role was Catheter Bearer, took his place behind the Introducer Bearer, the Annunciators and the Questioner of Purpose. As he passed Citizen Boyne, Germyn assisted him to assume the proper crouched-over position. Boyne looked up gratefully and Ger-



myn found the occasion correct for a commendatory half-smile.

The Questioner of Purpose said solemnly to Boyne: "It is your privilege to make a Donation here today. Do you wish to do so?"

"I do," said Boyne raptly. The anxiety had passed; clearly he was confident of making a good Donation. Germyn approved with all his heart.

The Annunciators, in alternate stanzas, announced the right pause for meditation to the meager crowd, and all fell silent. Citizen Germyn began the process of blanking out his mind, to ready himself for the great opportunity to Appreciate that lay ahead. A sound distracted him; he glanced up irritably. It seemed to come from the House of the Five Regulations, a man's voice, carrying. But no one else appeared to notice it. All of the watchers, all of those on the stone steps, were in somber meditation.

Germyn tried to return his thoughts to where they belonged.

But something was troubling him. He had caught a glimpse of the Donor and there had been something—something—

He angrily permitted himself to look up once more to see just what it had been about Citizen Boyne that had attracted his attention.

Yes, there was something. Over

the form of Citizen Boyne, silent, barely visible, a flicker of life and motion. Nothing tangible. It was as if the air itself were in motion.

It was, Germyn thought with a bursting heart—it was an Eye!

The veritable miracle of Translation and it was about to take place here and now, upon the person of Citizen Boyne! And no one knew it but Germyn himself!

**I**N this last surmise, Citizen Germyn was wrong. Or was he? True, no other human eyes saw the flawed-glass thing that twisted the air over Boyne's prostrate body, but there was, in a sense, another witness . . . some thousands of miles away.

The Pyramid on Mount Everest "stirred."

It did not move, but something about it moved, or changed, or radiated. The Pyramid surveyed its—cabbage patch? Wristwatch mine? As much sense, it may be, to say wristwatch patch or cabbage mine. At any rate, it surveyed what to it was a place where intricate mechanisms grew, ripened and were dug up at the moment of usefulness, whereupon they were quick-frozen and wired into circuits.

Through signals perceptible to it, the Pyramids had become "aware" that one of its mecha-



nisms was now ready to be plucked—harvested.

The Pyramid's blood was dielectric fluid. Its limbs were electrostatic charges. Its philosophy was: Unscrew It and Push. Its motive was survival.

Survival today was not what survival once had been, for a Pyramid.

Once survival had merely been gliding along on a cushion of repellent charges, streaming electrons behind for the push, sending h-f pulses out often enough to get a picture of their bounced return to integrate deep inside.

If the picture showed something metabolizable, one metabolized it. One broke it down into molecules by lashing it with the surplus protons left over from the dispersed electrons; one adsorbed the molecules. Sometimes the metabolizable object was an Immobile and sometimes a Mobile—a vague, theoretical, frivolous classification to a philosophy whose basis was that *everything* unscrewed. If it was a Mobile, one sometimes had to move after it.

That was the difference.

The essential was survival, not making idle distinctions. And one small part of survival today was the Everest Pyramid's job.

It sat and waited. It sent out its h-f pulses bouncing and scat-

tering, and it bounced and scattered them additionally on their return. Deep inside, the more-than-anamorphically distorted picture was reintegrated. Deeper inside, it was interpreted and evaluated for its part in survival.

**T**HERE was a need for certain mechanisms which grew on this planet. At irregular times, the Pyramid evaluated the picture to the effect that a mechanism—a wristwatch, so to speak—was ripe for plucking; and by electrostatic charges, it did so. The electrostatic charges, in forming, produced what humans called an Eye. But the Pyramid had no use for names.

It merely plucked, when a mechanism was ripe. It had found that a mechanism was ripe now.

A world away, before the steps of Wheeling's Federal Building, electrostatic charges gathered above a component whose name was Citizen Boyne. There was a small sound like the clapping of two hands which made the three hundred citizens of Wheeling jerk upright out of their meditations.

The sound was air filling the gap that had once been occupied by Citizen Boyne, who had instantly vanished—who had, in a word, been ripe and therefore been plucked.



## VI

**G**LENN Tropile and his sobbing wife passed the night in the stubble of a cornfield. Neither of them slept much.

Tropile, numbed by contact with the iron chill of the field—it would be months before the new Sun warmed the Earth enough for it to begin radiating in turn—tossed restlessly, dreaming. He was Wolf. Let it be so, he told himself again and again. *I will be Wolf. I will strike back at the Citizens. I will—*

Always the thought trailed off. He would exactly *What?* What could he do?

Migration was an answer—go to another city. With Gala, he guessed. Start a new life, where he was not known as Wolf.

And then what? Try to live a sheep's life, as he had tried all his years? And there was the question of whether, in fact, he could manage to find a city where he was not known. The human race was migratory, in these years of subjection to the never quite understood rule of the Pyramids.

It was a matter of insulation. When the new Sun was young, it was hot, and there was plenty of warmth; it was possible to spread north and south, away from final line of permafrost which, in North America, came

just above the old Mason-Dixon line. When the Sun was dying, the cold spread down. The race followed the seasons. Soon all of Wheeling would be spreading north again, and how was he to be sure that none of Wheeling's Citizens might not turn up wherever he might go?

He could be sure—that was the answer to that.

All right, scratch migration. What remained? He could—with Gala, he guessed—live a solitary life on the fringes of cultivated land. They both had some skill at rummaging the old storehouses of the ancients, and there was still food and other commodities to be found.

But even a Wolf is gregarious by nature and there were bleak hours in that night when Tropile found himself close to sobbing with his wife.

At the first break of dawn, he was up. Gala had fallen into a light and restless sleep; he called her awake.

"We have to move," he said harshly. "Maybe they'll get up enough guts to follow us. I don't want them to find us."

Silently she got up. They rolled and tied the blankets she had bought; they ate quickly from the food she had brought; they made packs and put them on their shoulders and started to walk. One thing in their favor:



they were moving fast, faster than any Citizen was likely to follow. All the same, Tropile kept looking nervously behind him.

They hurried north and east, and that was a mistake, because by noon they found themselves blocked by water. Once it had been a river; the melting of the polar ice caps that had submerged the coasts of the old continents had drowned it out and now it was salt water. But whatever it was, it was impassable. They would have to skirt it westward until they found a bridge or a boat.

"We can stop and eat," Tropile said grudgingly, trying not to despair.

They slumped to the ground. It was warmer now. Tropile found himself getting drowsier, drowsier—

He jerked erect and stared around belligerently. Beside him, his wife was lying motionless, though her eyes were open, gazing at the sky. Tropile sighed and stretched out. A moment's rest, he promised himself, and then a quick bite to eat, and then onward . . .

He was sound asleep when they spotted him.

**T**HERE was a flutter of iron bird's wings from overhead. Tropile jumped up out of his

sleep, awakening to panic. It was outside the possibility of belief, but there it was:

In the sky over him, etched black against a cloud, a helicopter. And men staring out of it, staring down at him.

A helicopter!

But there were no helicopters, or none that flew—if there had been fuel to fly them with—if any man had had the skill to make them fly. It was impossible! And yet there it was, and the men were looking at him, and the impossible great whirling thing was coming down, nearer.

He began to run in the downward wash of air from the vanes. But it was no use. There were three men and they were fresh and he wasn't. He stopped, dropping into the fighter's crouch that is pre-set into the human body, ready to do battle.

The men didn't want to fight. They laughed and one of them said amiably: "*Long* past your bedtime, boy. Get in. We'll take you home."

Tropile stood poised, hands half-clenched. "Take—"

"Take you home. Yeah. Where you belong, Tropile. Not back to Wheeling, if that's what is worrying you."

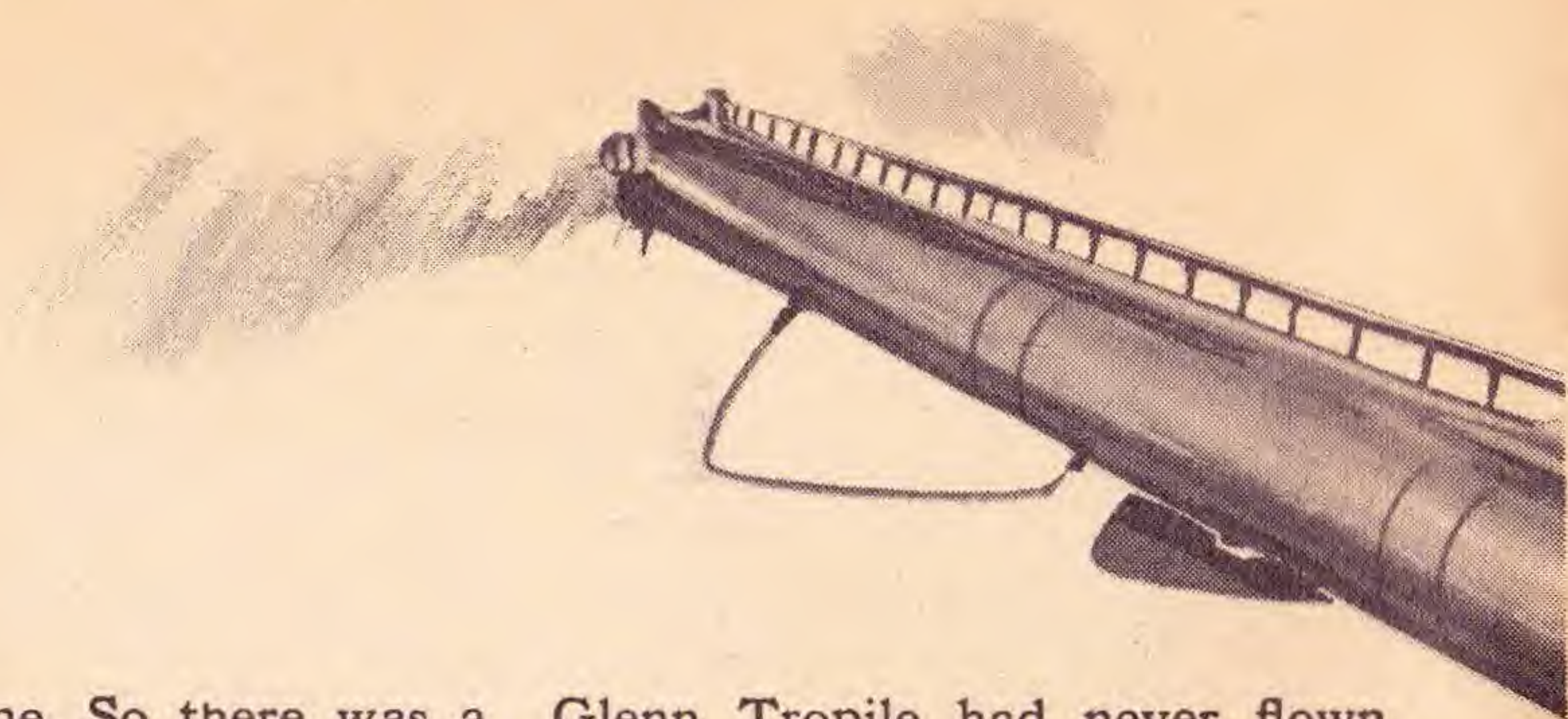
"Where I—"

"Where you belong."

Then Tropile understood.

He got into the helicopter won-





deringly. Home. So there was a home for such as he. He wasn't alone. He needn't keep his solitary self apart. He could be with his own kind.

He remembered Gala Tropile and paused. One of the men said with quick understanding: "Your wife? I think we saw her about half a mile from here. Heading back to Wheeling as fast as she could go."

Tropile nodded. That was better, after all. Gala was no Wolf, though he had tried his best to make her one.

One of the men closed the door; another did something with levers and wheels; the vanes whooshed around overhead; the helicopter bounced on its stiff-sprung landing legs and then rocked up and away.

For the first time in his life, Glenn Tropile looked down on the land.

They didn't fly high — but

Glenn Tropile had never flown at all, and the two or three hundred feet of air beneath made him faint and queasy. They danced through the passes in the West Virginia hills, crossed icy streams and rivers, swung past old empty towns which no longer even had names of their own. They saw no one.

It was something over four hundred miles to where they were going, one of the men told him. They made it easily before dark.

AS Tropile walked through the town in the evening light, electricity flared white and violet in the buildings around him. Imagine! Electricity was calories, and calories were to be hoarded.

There were other walkers in the street. Their gait was not the economical shuffle with pendant arms. They burned energy visibly. They swung. They







*strode*. It had been chiseled on his brain in earliest childhood that such walking was wrong, reprehensible, debilitating. It wasted calories. These people did not look debilitated and they didn't seem to mind wasting calories.

It was an ordinary sort of town, apparently named Princeton. It did not have the transient look to it of, say, Wheeling, or Altoona, or Gary, in Tropile's experience. It looked like — well, it looked permanent.

Tropile had heard of a town called Princeton, but it happened that he had never passed through it southwarding or northbound. There was no reason why he or anybody should or should not have. Still, there was a possibility, once he thought of it, that things were somehow so arranged that they should not; maybe it was all on purpose. Like every town, it was underpopulated, but not so much so as most. Perhaps one living space in five was used. A high ratio.

The man beside him was named Haendl, one of the men from the helicopter. They hadn't talked much on the flight and they didn't talk much now. "Eat first," Haendl said, and took Tropile to a bright and busy sort of food stall. Only it wasn't a stall. It was a restaurant.

This Haendl — what to make

of him? He should have been disgusting, nasty, an abomination. He had no manners whatever. He didn't know, or at least didn't use, the Seventeen Conventional Gestures. He wouldn't let Tropile walk behind him and to his left, though he was easily five years Tropile's senior. When he ate, he *ate*. The Sip of Appreciation, the Pause of First Surfeit, the Thrice Proffered Share meant nothing to him. He laughed when Tropile tried to give him the Elder's Portion.

Cheerfully patronizing, this man Haendl said to Tropile: "That stuff's all right when you don't have anything better to do with your time. Those poor mutts don't. They'd die of boredom without their inky-pinky cults and they don't have the resources to do anything bigger. Yes, I do know the Gestures. Seventeen delicate ways of communicating emotions too refined for words. The hell with them, Tropile. I've got words. You'll learn them, too."

Tropile ate silently, trying to think.

A man arrived, threw himself in a chair, glanced curiously at Tropile and said: "Haendl, the Somerville Road. The creek backed up when it froze. Flooded bad. Ruined everything."

Tropile ventured: "The flood ruined the road?"



"The road? No. Say, you must be the fellow Haendl went after. Tropile, that the name?" He leaned across the table, pumped Tropile's hand. "We had the road nicely blocked," he explained. "The flood washed it clean. Now we have to block it again."

Haendl said: "Take the tractor if you need it."

The man nodded and left.

Haendl said: "Eat up. We're wasting time. About that road—we keep all entrances blocked up, see? Why let a lot of sheep in and out?"

"Sheep?"

"The opposite," said Haendl, "of Wolves."

**T**AKE ten billion people and say that, out of every million of them, one—just one—is different. He has a talent for survival; call him Wolf. Ten thousand of him in a world of ten billion.

Squeeze them, freeze them, cut them down. Let old Rejoice in Messias loom in the terrifying sky and so abduct the Earth that the human race is decimated, fractionated, reduced to what is in comparison a bare handful of chilled, stunned survivors. There aren't ten billion people in the world any more. No, not by a factor of a thousand. Maybe there are as many as ten million, more or less, rattling

around in the space their enormous Elder Generations made for them.

And of these ten million, how many are Wolf?

Ten thousand.

"You understand, Tropile?" said Haendl. "We survive. I don't care what you call us. The sheep call us Wolves. Me, I kind of call us Supermen. We have a talent for survival."

Tropile nodded, beginning to understand. "The way I survived the House of the Five Regulations."

Haendl gave him a pitying look. "The way you survived thirty years of Sheephood before that. Come on."

It was a tour of inspection. They went into a building, big, looking like any other big and useful building of the ancients, gray stone walls, windows with ragged spears of glass. Inside, though, it wasn't like the others. Two sub-basements down, Tropile winced and turned away from the flood of violet light that poured out of a quartz bull's-eye on top of a squat steel cone.

"Perfectly harmless, Tropile—you don't have to worry," Haendl boomed. "Know what you're looking at? There's a fusion reactor down there. Heat. Power. All the power we need. Do you know what that means?"

He stared soberly down at the



flaring violet light of the inspection port.

"Come on," he said abruptly to Tropile.

Another building, also big, also gray stone. A cracked inscription over the entrance read: **ORIAL HALL OF HUMANITIES**. The sense-shock this time was not light; it was sound. Hammering, screeching, rattling, rumbling. Men were doing noisy things with metal and machines.

"Repair shop!" Haendl yelled. "See those machines? They belong to our man Innison. We've salvaged them from every big factory ruin we could find. Give Innison a piece of metal—any alloy, any shape—and one of those machines will change it into any other shape and damned near any other alloy. Drill it, cut it, plane it, weld it, smelt it, zone-melt it, bond it—you tell him what to do and he'll do it.

"We got the parts to make six tractors and forty-one cars out of this shop. And we've got other shops—aircraft in Farmingdale and Wichita, armaments in Wilmington. Not that we can't make some armaments here. Innison could build you a tank if he had to, complete with 105-millimeter gun."

"What's a tank?" Tropile asked.

Haendl only looked at him and said: "Come on!"

**G**LENN Tropile's head spun dizzily and all the spectacles merged and danced in his mind. They were incredible. All of them.

Fusion pile, machine shop, vehicular garage, aircraft hangar. There was a storeroom under the seats of a football stadium, and Tropile's head spun on his shoulders again as he tried to count the cases of coffee and canned soups and whiskey and beans. There was another storeroom, only this one was called an armory. It was filled with . . . guns. Guns that could be loaded with cartridges, of which they had very many; guns which, when you loaded them and pulled the trigger, would fire.

Tropile said, remembering: "I saw a gun once that still had its firing pin. But it was rusted solid."

"These work, Tropile," said Haendl. "You can kill a man with them. Some of us have."

"Kill—"

"Get that sheep look out of your eyes, Tropile! What's the difference how you execute a criminal? And what's a criminal but someone who represents a danger to your world? We prefer a gun instead of the Donation of the Spinal Tap, because it's quicker, because it's less messy—and because we don't like to drink spinal fluid, no matter what



imaginary therapeutic or symbolic value it has. You'll learn."

But he didn't add "come on." They had arrived where they were going.

It was a small room in the building that housed the armory and it held, among other things, a rack of guns.

"Sit down," said Haendl, taking one of the guns out of the rack thoughtfully and handling it as the doomed Boyne had caressed his watch-case. It was the latest pre-Pyramid-model rifle, anti-personnel, short-range. It would not scatter a cluster of shots in a coffee can at more than two and a half miles.

"All right," said Haendl, stroking the stock. "You've seen the works, Tropile. You've lived thirty years with sheep. You've seen what they have and what we have. I don't have to ask you to make a choice. I know what you choose. The only thing left is to tell you what we want from you."

A faint pulsing began inside Glenn Tropile. "I expected we'd be getting to that."

"Why not? We're not sheep. We don't act that way. Quid pro quo. Remember that—it saves time. You've seen the quid. Now we come to the quo." He leaned forward. "Tropile, what do you know about the Pyramids?"

"Nothing."

Haendl nodded. "Right. They're all around us and our lives are beggared because of them. And we don't even know why. We don't have the least idea of what they are. Did you know that one of the sheep was Translated in Wheeling when you left?"

"Translated?"

Tropile listened with his mouth open while Haendl told him about what had happened to Citizen Boyne.

"So he didn't make the Donation after all," Tropile said.

"Might have been better if he had," said Haendl. "Still, it gave you a chance to get away. We had heard—never mind how just yet—that Wheeling'd caught itself a Wolf, so we came looking for you. But you were already gone."

**T**RUPILE said, faintly annoyed: "You were damn near too late."

"Oh, no, Tropile," Haendl assured him. "We're never too late. If you don't have enough guts and ingenuity to get away from sheep, you're no wolf—simple as that. But there's this Translation. We know it happens, but we don't even know what it is. All we know, people disappear. There's a new sun in the sky every five years or so. Who makes it? The Pyramids. How? We don't know that. Sometimes



something floats around in the air and we call it an Eye. It has something to do with Translation, something to do with the Pyramids. What? We don't know that."

"We don't know much of anything," interrupted Tropile, trying to hurry him along.

"Not about the Pyramids, no." Haendl shook his head. "Hardly anyone has ever seen one, for that matter."

"Hardly — You mean you have?"

"Oh, yes. There's a Pyramid on Mount Everest, you know. That's not just a story. It's true. I've been there, and it's there. At least, it was there five years ago, right after the last Sun Re-creation. I guess it hasn't moved. It just sits there."

Tropile listened, marveling. To have seen a real Pyramid! Almost he had thought of them as legends, contrived to account for such established physical facts as the Eyes and Translation, as children with a Santa Claus. But this incredible man had seen it!

"Somebody dropped an H-bomb on it, way back," Haendl continued, "and the only thing that happened is that now the North Col is a crater. You can't move the Pyramid. You can't hurt it. But it's alive. It has been there, alive, for a couple of hundred years; and that's about all

we know about the Pyramids. Right?"

"Right."

Haendl stood up. "Tropile, that's what all of this is all about!" He gestured around him. "Guns, tanks, airplanes—we want to know more! We're going to find out more and then we're going to fight."

There was a jarring note and Tropile caught at it, sniffing the air. Somehow — perhaps it was his sub-adrenals that told him—this very positive, very self-willed man was just the slightest bit unsure of himself. But Haendl swept on and Tropile, for a moment, forgot to be alert.

"We had a party up Mount Everest five years ago," Haendl was saying. "We didn't find out a thing. Five years before that, and five years before *that*—every time there's a sun, while it is still warm enough to give a party a chance to climb up the sides—we send a team up there. It's a rough job. We give it to the new boys, Tropile. Like you."

There it was. He was being invited to attack a Pyramid.

Tropile hesitated, delicately balanced, trying to get the *feel* of this negotiation. This was Wolf against Wolf; it was hard. There had to be an advantage—

"There is an advantage," Haendl said aloud.

Tropile jumped, but then he



remembered: Wolf against Wolf.

Haendl went on: "What you get out of it is your life, in the first place. You understand you can't get out now. We don't want sheep meddling around. And in the second place, there's a considerable hope of gain." He stared at Tropile with a dreamer's eyes. "We don't send parties up there for nothing, you know. We want to get something out of it. What we want is the Earth."

"The Earth?" It reeked of madness. But this man wasn't mad.

"Some day, Tropile, it's going to be us against them. Never mind the sheep—they don't count. It's going to be Pyramids and Wolves, and the Pyramids won't win. And then—"

It was enough to curdle the blood. This man was proposing to *fight*, and against the invulnerable, the godlike Pyramids.

But he was glowing and the fever was contagious. Tropile felt his own blood begin to pound. Haendl hadn't finished his "and then—" but he didn't have to. The "and then" was obvious: And then the world takes up again from the day the wandering planet first came into view. And then we go back to our own solar system and an end to the five-year cycle of frost and hunger.

And then the Wolves can rule a world worth ruling.

It was a meretricious appeal, perhaps, but it could not be refused. Tropile was lost.

He said: "You can put away the gun, Haendl. You've signed me up."

## VII

THE way to Mount Everest, Tropile glumly found, lay through supervising the colony's nursery school. It wasn't what he had expected, but it had the advantages that while his charges were learning, he was learning, too.

One jump ahead of the three-year-olds, he found that the "wolves," far from being predators on the "sheep," existed with them in a far more complicated ecological relationship. There were Wolves all through sheepdom; they leavened the dough of society.

In barbarously simple prose, a primer said: "The Sons of the Wolf are good at numbers and money. You and your friends play money games almost as soon as you can talk, and you can think in percentages and compound interest when you want to. Most people are not able to do this."

True, thought Tropile subvocally, reading aloud to the tots.



That was how it had been with him.

"Sheep are afraid of the Sons of the Wolf. Those of us who live among them are in constant danger of detection and death—although ordinarily a Wolf can take care of himself against any number of sheep." True, too.

"It is one of the most dangerous assignments a Wolf can be given to live among the sheep. Yet it is essential. Without us, they would die—of stagnation, of rot, eventually of hunger."

It didn't have to be spelled out any further. Sheep can't mend their own fences.

The prose was horrifyingly bald and the children were horrifyingly—he choked on the word, but managed to form it in his mind — *competitive*. The verbal taboos lingered, he found, after he had broken through the barriers of behavior.

But it was distressing, in a way. At an age when future Citizens would have been learning their Little Pitcher Ways, these children were learning to fight. The perennial argument about who would get to be Big Bill Zeckendorf when they played a strange game called "Zeckendorf and Hilton" sometimes ended in bloody noses.

And nobody—nobody at all—meditated on Connectivity.

Tropile was warned not to do

it himself. Haendl said grimly: "We don't understand it and we don't like what we don't understand. We're suspicious animals, Tropile. As the children grow older, we give them just enough practice so they can go into one meditation and get the feel of it—or pretend to, at any rate. If they have to pass as Citizens, they'll need that much. But more than that we do not allow."

"Allow?" Somehow the word grated; somehow his sub-adrenals began to pulse.

"Allow! We have our suspicions and we know for a fact that sometimes people disappear when they meditate. We don't want to disappear. We think it's not a good thing to disappear. Don't meditate, Tropile. You hear?"

**B**UT later, Tropile had to argue the point. He picked a time when Haendl was free, or as nearly free as that man ever was. The whole adult colony had been out on what they used as a parade ground—it had once been a football field, Haendl said. They had done their regular twice-a-week infantry drill, that being one of the prices one paid for living among the free, progressive Wolves instead of the dull and tepid sheep.

Tropile was mightily winded, but he cast himself on the ground near Haendl, caught his breath



and said: "Haendl—about meditation."

"What about it?"

"Well, perhaps you don't really grasp it."

Tropile searched for words. He knew what he wanted to say. How could anything that felt as good as Oneness be bad? And wasn't Translation, after all, so rare as hardly to matter? But he wasn't sure he could get through to Haendl in those terms.

He tried: "When you meditate successfully, Haendl, you're one with the Universe. Do you know what I mean? There's no feeling like it. It's indescribable peace, beauty, harmony, repose."

"It's the world's cheapest narcotic," Haendl snorted.

"Oh, now, really—"

"And the world's cheapest religion. The stone-broke mutts can't afford gilded idols, so they use their own navels. That's all it is. They can't afford alcohol; they can't even afford the muscular exertion of deep breathing that would throw them into a state of hyperventilated oxygen drunkenness. Then what's left? Self-hypnosis. Nothing else. It's all they can do, so they learn it, they define it as pleasant and good, and they're all fixed up."

Tropile sighed. The man was so stubborn! Then a thought occurred to him and he pushed him-

self up on his elbows. "Aren't you leaving something out? What about Translation?"

Haendl glowered at him. "That's the part we don't understand."

"But surely self-hypnosis doesn't account for—"

"Surely it doesn't!" Haendl mimicked savagely. "All right. We don't understand it and we're afraid of it. Kindly do not tell me Translation is the supreme act of Un-willing, Total Disavowal of Duality, Unison with the Brahm-Ground or any such slop. You don't know what it is and neither do we." He started to get up. "All we know is, people vanish. And we want no part of it, so we don't meditate. None of us—including you!"

**I**T was foolishness, this close-order drill. Could you defeat the unreachable Himalayan Pyramid with a squads-right flanking maneuver?

And yet it wasn't all foolishness. Close-order drill and 2500-calorie-a-day diet began to put fat and flesh and muscle on Tropile's body, and something other than that on his mind. He had not lost the edge of his acquisitiveness, his drive—his whatever it was that made the difference between Wolf and sheep.

But he had gained something. Happiness? Well, if "happiness"



is a sense of purpose, and a hope that the purpose can be accomplished, then happiness. It was a feeling that had never existed in his life before. Always it had been the glandular compulsion to gain an advantage, and that was gone, or anyway almost gone, because it was permitted in the society in which he now lived.

Glenn Tropile sang as he putt-putted in his tractor, plowing the thawing Jersey fields. Still, a faint doubt remained. Squads right against the Pyramids?

Stiffly, Tropile stopped the tractor, slowed the diesel to a steady *thrum* and got off. It was hot—being midsummer of the five-year calendar the Pyramids had imposed. It was time for rest and maybe something to eat.

He sat in the shade of a tree, as farmers always have done, and opened his sandwiches. He was only a mile or so from Princeton, but he might as well have been in Limbo; there was no sign of any living human but himself. The northering sheep didn't come near Princeton—it "happened" that way, on purpose.

He caught a glimpse of something moving, but when he stood up for a better look into the woods on the other side of the field, it was gone. Wolf? *Real* Wolf, that is? It could have been a bear, for that matter—there was talk of wolves and bears

around Princeton; and although Tropile knew that much of the talk was assiduously encouraged by men like Haendl, he also knew that some of it was true.

As long as he was up, he gathered straw from the litter of last "year's" head-high grass, gathered sticks under the trees, built a small fire and put water on to boil for coffee. Then he sat back and ate his sandwiches, thinking

Maybe it was a promotion, going from the nursery school to labor in the fields. Or maybe it wasn't. Haendl had promised him a place in the expedition that would—maybe—discover something new and great and helpful about the Pyramids. And that might still come to pass, because the expedition was far from ready to leave.

Tropile munched his sandwiches thoughtfully. Now *why* was the expedition so far from ready to leave? It was absolutely essential to get there in the warmest weather possible—otherwise Mt. Everest was unclimbable. Generations of alpinists had proved that. That warmest weather was rapidly going by.

And *why* were Haendl and the Wolf colony so insistent on building tanks, arming themselves with rifles, organizing in companies and squads? The H-bomb hadn't flustered the Pyramid. What lesser weapon could?



Uneasily, Tropile put a few more sticks on the fire, staring thoughtfully into the canteen cup of water. It was a satisfyingly hot fire, he noticed abstractedly. The water was very nearly ready to boil.

**H**ALF across the world, the Pyramid in the Himalays felt, or heard, or tasted—a difference.

Possibly the h-f pulses that had gone endlessly wheep, wheep, wheep were now going wheep-beep, wheep-beep. Possibly the electromagnetic “taste” of lower-than-red was now spiced with a tang of beyond-violet. Whatever the sign was, the Pyramid recognized it.

A part of the crop it tended was ready to harvest.

The ripening bud had a name, of course, but names didn’t matter to the Pyramid. The man named Tropile didn’t know he was ripening, either. All that Tropile knew was that, for the first time in nearly a year, he had succeeded in catching each stage of the nine perfect states of water-coming-to-a-boil in its purest form.

It was like . . . like . . . well, it was like nothing that anyone but a Water Watcher could understand. He observed. He appreciated. He encompassed and absorbed the myriad subtle per-

fections of time, of shifting transparency, of sound, of distribution of ebullieny, of the faint, faint odor of steam.

Complete, Glenn Tropile relaxed all his limbs and let his chin rest on his breast-bone.

It was, he thought with placid, crystalline perception, a rare and perfect opportunity for meditation. He thought of Connectivity. (Overhead, a shifting glassy flaw appeared in the thin, still air.) There wasn’t any thought of Eyes in the erased palimpsest that was Glenn Tropile’s mind. There wasn’t any thought of Pyramids or of Wolves. The plowed field before him didn’t exist. Even the water, merrily bubbling itself dry, was gone from his perception.

He was beginning to meditate.

Time passed—or stood still—for Tropile; there was no difference. There was no time. He found himself almost on the brink of Understanding.

Something snapped. An intruding blue-bottle drone, maybe, or a twitching muscle. Partly, Tropile came back to reality. Almost, he glanced upward. Almost, he saw the Eye . . .

It didn’t matter. The thing that really mattered, the only thing in the world, was all within his mind; and he was ready, he knew, to find it.



Once more! Try harder!

He let the mind-clearing unanswerable question drift into his mind:

*If the sound of two hands together is a clapping, what is the sound of one hand?*

Gently he pawed at the question, the symbol of the futility of mind—and therefore the gateway to meditation. Unawareness of self was stealing deliciously over him.

He was Glenn Tropile. He was more than that. He was the water boiling . . . and the boiling water was he. He was the gentle warmth of the fire, which was—which was, yes, itself the arc of the sky. As each thing was each other thing; water was fire, and fire air; Tropile was the first simmering bubble and the full roll of

Well-aged Water was Self, was—more than Self—was—

The answer to the unanswerable question was coming clearer and softer to him. And then, all at once, but not suddenly, for there was no time, it was not close—it was.

The answer was his, was him. The arc of sky was the answer, and the answer belonged to sky—to warmth, to all warmths that there are, and to all waters, and—and the answer was — was —

Tropile vanished. The mild thunderclap that followed made the flames dance and the column of steam fray; and then the fire was steady again, and so was the rising steam. But Tropile was gone.

—FREDERIK POHL  
and C. M. KORNBLUTH

CONCLUDED NEXT MONTH

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# Share Alike

By DANIEL F. GALOUYE

Illustrated by DILLON

*Two objects occupying the same space at the same time solve a great many problems—or create an exasperating one like this!*

**W**HEN CHERRY discovered there was a man in her apartment, she was quite righteously and understandably indignant.

Not that she was unduly puritanical in the matter of sharing her quarters with a man she didn't know. After all, residential facilities for the unmarried personnel in Rigel IV-Port were critically limited. And girls were ex-

pected to share apartments — with the chances being about even that the "other person" would be a man.

Disgustedly, she fluffed the cushion on the sofa to smooth out the imprint of his bulky frame — he must be a giant to have made that much of a hollow! — and slammed the window against the cold wind — fresh-air fiend, too!

Allowing her resentment no



chance to abate, she stormed over to the videocom and punched the number for Housing.

"Expediter's office." The receptionist's voice came through buoyantly, even before her image formed on the screen. "Good morn —"

"It is *not* a good morning!" Cherry said, her red hair swirling as she shook her head emphatically.

"First," she thrust up a rigid finger to enumerate the point, "there are no mornings here.

"Second," another finger indicated, "none of them would be good with a gale blustering around outside and a man blustering around inside!"

"Oh, it's you, Miss O'Day," the receptionist said disappointedly as her face replaced the shifting pattern on the screen.

"Yes, it's me — Cherry O'Day, Coefficient B, Shift B. And there's still a man in my apartment!"

"Naturally," said the receptionist wearily. "You understood when you were assigned to the dormitory that —"

"I understood there would be a man or a woman. But I was also assured that regardless of whatever else it was, it would be Coefficient A, Shift A, and that it would be either working or at recreation during the twelve hours I am entitled to the apartment!"

"I know," the receptionist said impatiently. "And it — I mean he is Coefficient of Existence A, but Shift B — the same shift as yours."

"And every time I turn around in my apartment, there he is — or, rather, there he isn't. What space-happy idiot in your office assigned him to the right CE, but the wrong shift?"

**C**HERRY stamped her foot and folded her arms so there would be no question as to the uncompromising nature of her indignation.

"We have your complaint on file, Miss O'Day," the receptionist began formally, "and —"

"Then do something about it! I don't care to spend any more sleep periods in bed with a man, however relatively immaterial he may be!"

The receptionist shrugged apathetically. "These things take time, you know."

"Is Art — is Mr. Edson in?"

"Not yet. The A-Shift Expediter is still on duty. Would you like to speak with him?"

"Never mind," Cherry answered stiffly. "I'll be in later."

Exasperated, she snapped off the videocom. If there was one thing she was sure of, it was that she would stand for no more delay in regaining unchallenged occupancy of her apartment during her B-Shift off-period.



This Mr. Whatever-His-Name-Is was imminently close to getting thrown out on his ear regardless of his unguessable bulk . . . provided she could improvise some means of locating his nonexistent ear.

Resolutely, she strode back into the hall and waited next to the bathroom door, focusing her rage on the mocking patter of shower water against porcelain and flesh.

Then she winced as his deep bass voice rose gratingly off key:

*"Oh-h-h-h, the ship slipped out of Hyper*

*With-h-h-h the motions of a viper . . ."*

Furiously, she beat on the door.

The spray stopped like the tail-end of a cloudburst.

"Still out there?" There was more amusement than annoyance in his tone.

"Sometime this morning," she said with forced control, "I am expected to report to work. Before then, however, there are some trifling personal necessities I must attend to — if you will concede," she was shouting now, "that I am entitled to the use of my bathroom!"

"Temper, temper!" he chided. "Our bathroom." His voice was mockingly placating as the door-knob turned. "After all, I'm as much inconvenienced as you. But do I go around shouting?"

The door swung open and a large white towel, briskly rubbing nothing, swept past her and into the bedroom.

"You could at least move out," she said, following the towel and squinting as though she might find something else to direct her words to, "before the whole base discovers I'm sharing my apartment with a Coefficient A man who's on the B-Shift!"

The towel fluttered down and draped itself across the back of a chair.

"It could be worse," he suggested. "Suppose I were Coefficient B, like you. Then they'd really have something to waggle their tongues about." The disembodied voice receded as its owner crossed the room.

"Please move out!" she begged.

"Back to the shuttle? Uh-uh. You move out."

"This is my apartment and you aren't going to tell me —"

"Ah-ah! Watch that blood pressure, sweetheart!"

A DRESSER drawer opened and, a moment later, closed. Then another. But, naturally, she couldn't see any of the things he was withdrawing; they were Displacement A articles so they could co-exist in the same space with her clothes.

For a long while, she was silent, trying to control her rage, not



caring that time was slipping by and she would be even later for work. If she could only do *something!*

The locker door opened and the light went on inside, illuminating her clothes on the racks — the same racks that held his things, only on a different level of existence.

Smiling vengefully, she went stealthily forward, until she realized she and her personal effects were as immaterial and invisible to him as he was to her. Then she lunged across the remaining distance and slammed the door, locking it.

"Now," she said triumphantly, "you may come out when you agree to vacate!"

Silence.

"Otherwise you'll stay in there until the Expediter comes and straightens out this mess."

A sudden burst of laughter exploded behind her and she spun around, crying out apprehensively.

"I wondered when you'd try something like that," he chuckled.

She watched the broad impression return in the sofa cushion, straining her eyes as though she might force herself to negotiate, visually at least, the barrier between the two coefficients of existence.

Then, impulsively, she seized a vase from the dresser and hurled it.

Spilling artificial flowers, it jolted to a stop in midair above the sofa. The cushion's hollow smoothed out abruptly and the vase drifted erratically back to its place on the dresser.

"Easy, honey! How'd you like it if I started throwing mutually existent things at you?"

Cherry waited until he left and then rushed through her shower, regaining some of the time she had lost, and hurriedly dressed with only token attention to detail.

She darted across the lobby and slammed into the Coefficient Booth. Using her B-type key, she activated the rectifiers and waited until her displacement was erased and until the door swung open. Then, once again on a normal plane of existence, she raced outside.

**F**ORTUNATELY there was a bus waiting at the stop. It whisked her to the Expediter's office, where she soon stood fuming in front of his desk.

"Art, how long is this going to last?"

"That man again?" Only half holding back a smile, he ran a hand over his closely cropped blond hair and came around the desk.

"You've got to do something!" she burst out.

"Look, Cherry — we're doing



the best we can. It was the A-Shift Expediter's mistake. He's checking it through now."

"I've had enough! I'm going straight to the Coordinator!"

Art shrugged. "Can't. He's eighty-six million miles away on a survey of Rigel V-Port."

"And what am I supposed to do in the meantime?"

"You might try bearing with us and making the best of the situation. Anyway, even if we found out how the mistake was made, we couldn't do anything about it right now. The unmarried personnel quarters are all filled. We'd have to change his shift. That would upset the balance of the entire working force."

"You could make him move back aboard the shuttle," she insisted.

"The shuttle's been sent to V-Port. Don't you see, Cherry, we're helpless until the Coordinator returns? In any case, it can't be all that serious. You and this fellow are on different coefficients of existence, so it can't be a critical question of morals."

"Oh, it can't, can't it?" she said. "Just tell me who he is — how I can meet him face to face!"

Art spread his hands helplessly. "You know if he's in there by mistake, there's no way of tracking down his identity until we find out how the mistake was made. Housing assignments are re-

stricted — a matter of preserving privacy under the apartment-sharing plan."

She drew herself up to her full five foot two. "If you thought anything of me, you'd find some way to dump him out on his neck."

"Now how can I do that?" he reasoned. "Like you, all I've got is a B-key, which makes him nonexistent to me, too, while we're in the dormitory. Taking a sock at nothing wouldn't do any good. And I don't think I could forcibly convince nothing to tell me who he is so I could settle with him outside."

She let her chin and shoulders down. "I give up. What am I supposed to do — place myself at the mercy of a practical joker for the rest of my time here?"

"You might try marrying me, you little hothead. Then we could move into the married persons' quarters and forget the whole thing."

"For the twentieth time — *no!*"

"Why not, Cherry? What's wrong with me?"

She backed off and surveyed him. Actually, there wasn't anything wrong with him.

"For one thing, you don't love me," she accused. "If you did, you wouldn't stand around and see me living in an apartment with another man."

"If I clear up the mistake — if I find some way to get him out —



will you marry me then?"

She turned away. "No, Art. That's what they expect the pre-colonization force to do — marry among themselves and stay on as colonists after everything is prepared."

"I'd forgotten," he said dejectedly. "You're going to make a career out of pre-colonization."

**A**T SPACE plot, Cherry rushed across the large, circular room to her calculator console.

"Wish *I* had devastating looks," Madge said jokingly as she gathered up her things. "Then I could throw away my clock, too."

Cherry glanced up at the time. She hadn't expected to be an hour late to relieve the other girl.

"Same trouble," she explained. "I went to see Art again."

"Any results?"

She shook her head irritably and began punching coordinate figures onto the tape.

"Learn who he is?" Madge asked.

"Not yet. But I will," Cherry said resolutely. Then she drew back and stared incriminatingly at the keyboard as she surveyed a broken nail.

Madge squirmed into her coat. "I've heard of guys like that. They think it's fun — keeping a girl hopping when she can't see him any more than he can see her. Does something for their

masculine ego. But just catch him away from the dormitory without his CE-A and your CE-B and he'll soon cower!"

Cherry's resolute expression slumped. "I can't find out who he is. He's protected by hidden-identity regulations."

She snatched open the top of the machine and jerked out the half-punched roll of tape. She had fed in data for at least three hyper-approach paths that would put incoming ships within frying distance of Rigel. She started over again with the first coordinates.

Madge leaned over and nudged her in the ribs. "If you can't get rid of the guy, why don't you marry him? You're already living with him, practically."

"Bright girl," Cherry said, not in the least amused.

"I'll bet *he* wouldn't frown on the suggestion if he knew his roommate was almost Miss Procyon VI."

Cherry hurled the role of tape and Madge ducked.

Then she frowned troubledly. "Why do they have to have this silly setup of Coefficient Displacements to complicate pre-colonization work?"

"Ultimate economy of space," Madge said, parroting a phrase from the Handbook. "They could put two girls in one apartment and two men in another. But then







the IV-Port base would need twice as many drawers, chairs, lockers, dressers, desks and so forth. It's easier to have two shifts sharing the quarters at different times and separated on different planes of existence."

**P**ENSIVELY, Cherry stood before the range, watching the pot of water come to a boil. Maybe she could manage to ignore the man until the Coordinator returned. After all, she reminded herself, he wasn't really there at all, since they were assigned to different levels of existence while in the dormitory. She could hear him talk only because the air, which carried the vibrations of his voice, was mutually existent between them.

Something rammed sharply into her back and she whirled around.

"Sorry, darling," the rumbling bass voice apologized. "Didn't know you were here."

A frying pan, waist-high, circled wide around her and landed on a burner. She glared with her most annoyed expression for fully a minute before she realized the look was futile; as far as he was concerned, she wasn't really there at all.

The cupboard door swung out and a can of assorted vegetables made a descending arc to the range and began opening itself.

*"Oh-h-h-h, the ship slipped out —"*

"Please!" she shouted. "Please spare me that foghorn voice of yours!"

The voice stopped, but the tune continued—in a shrill, off-key whistle.

The can elevated, tipped over and poured its contents into the frying pan.

Just like a man—not knowing when to use a pot.

Eventually the whistling stopped and the fire was extinguished under the pan. A minute passed and she began hesitantly scanning the kitchen for moving articles that might betray his whereabouts.

The cupboard opened again and a canister floated over to the table and kicked off its lid. A small mound of flour levitated from the container and drifted over toward her. Puzzled, she wondered what sort of recipe would call for "a handful of flour" to be added to vegetables.

But the white mound steadied and hung motionless between her and the range.

"This is my first experience with CE-Displacement," he said thoughtfully.

She backed away. The flour advanced, following her in a half-circle around the kitchen. But how could he know where she was?



He laughed. "Imagine — you displaced a half-level above normal existence and me a half-level below."

"Three or four levels might be a better arrangement," she said uncertainly, her eyes riveted on the flour.

"Interesting, this CE-A and CE-B gimmick," he continued, "and mutually co-existent articles — like the furnishings in the apartment and the food in the kitchen."

Of course! The apron she was wearing — that was how he knew where she was! It was only one of the apartment's items that were as real to *both* of them as was the mound of flour in his hand.

"Ever consider," he suggested, "that there might be a way of seeing what you look like?"

"You wouldn't dare!"

His breath came out with a *poof* and the flour covered her face with a fine powder.

Stupefied, she stood staring in his direction.

"Small chin," he appraised, "up-turned nose, rather high cheekbones. Hm-m-m . . . Blonde or brunette?"

Enraged, she fled from the room.

**B**UT it was only the beginning of a climactic night, she found out soon after she activated the light filters on the windows

and turned on a table lamp in the living room.

She selected Brahms on the Central Relay Receiver. But before she could return to the sofa, the Lullabye faded and a dissonant bit of syncopation replaced it.

Determinedly, she went back to the receiver and reset the dial. Even before she removed her hand, however, she felt the knob return to the other position.

Tightening her grip, she moved it back. But again it rotated in the opposite direction. Deciding she could present a better display of unruffled dignity by not creating a scene, she got a book and returned to the sofa.

But she had hardly read a paragraph before she felt the cushion under her sink considerably lower. An open magazine which she hadn't noticed before drifted up and positioned itself in front of her book.

She moved the book around in front of the magazine, but the magazine only leap-frogged over the book and once more blocked her vision.

"There are two ends to this sofa," she said with teeth-gritting politeness.

"But, darling," he protested facetiously, "there's hardly any light over there."

She snapped to her feet and stood facing the depression in the



cushion. Then, in a flash of inspiration, she slammed the book shut and swung it sharply in front of her. That the volume was mutually co-existent was proved by the smack of paper against flesh.

But her satisfaction quickly melted in embarrassment before his laughter.

Frustrated, Cherry went to bed.

But only minutes later, she felt the mattress sag under his weight.

"Asleep, sweetheart?" he asked.

She didn't answer; she moved closer to the edge of the bed. There was no one there, she told herself. If she reached out, she would feel nothing except the empty space where his body — in another level of existence — held the top sheet up and away from the bottom one.

Still, it was so upsettingly real — being aware of his every move, the pull of the covers when he tugged on them, the sound of his breathing.

Abruptly, the section of the co-existent sheet that was folded back over the covers swung up and fluttered down on her face.

She started to spring erect. But his hands, given reciprocal reality by the sheet, clasped her cheeks. Then his lips pressed down firmly against hers through the cloth.

Fuming, she jumped from the bed, grabbed her pillow and stomped out to the sofa, trying not to hear his chuckling.

If only she could come face to face with him outside! She would humiliate him so severely in front of everyone within earshot that he would become the laughing stock of the base and it would be impossible for him to stay on at IV-Port!

Suddenly, a plan began taking shape and a smile relaxed her face as she gave it serious consideration.

**C**HERRY was up early the next morning and out through the Coefficient Displacement Stall before her phantom roommate was even awake. Hidden behind a plant in the outer lobby, she stood vigil with her eyes on the booth, secure in the knowledge that there was no exit from the dormitory except through the nucleo-polarizer.

There was the subtle glow of the rectifier field inside the enclosure and a small, lean man stepped out, glancing anxiously at his watch.

If she studied everyone who came through, she would at least provide herself with a list of possible suspects. And by eliminating those who didn't meet the physical specifications, she could narrow the field down to a handful.

Three women came through in quick succession, hardly allowing time for the glow to subside in the stall. Then a steady flow of



workers was emerging. That was even better, Cherry realized. If she managed to spot him while the lobby was filled with witnesses, the ridicule that she would heap on him would be more humiliating.

Four more men, all the wrong sizes and shapes, and two women trailed out. Then came a stout man, but too short; next a tall man, but too thin.

She was just beginning to doubt her chance for success when she heard a whistled song coming through from somewhere on the other side of the booth. Excitedly, she added subvocal words to the tune: "The ship slipped out of . . ."

The whistling stopped. But at least she knew he would be coming through shortly.

The rectifier's glow flared, then the next suspect stepped out. He was tall and muscular, heavy but not stout. And bald, with a fringe of hair circling his head like a horseshoe . . .

Just the type! She had known all along that he would look something like that, even down to his almost contemptuous smile!

She plunged from her hiding place, swinging her handbag. It caught him full in the chest and he fell back with a grunt of surprise.

"You're the one, you miserable sneak!" Cherry brought the bag

up in an overhanded swing and down on his head.

The last dozen or so persons who had come through the booth crowded around.

"Hide out in a girl's apartment, will you?" Her tongue worked like a lash as she aimed the bag at his face. "Try to take advantage of a clerical error!"

**H**E RETREATED, but she gave him no quarter. Her bag broke and spilled; she tossed it aside and used her hard little fists.

Suddenly someone had her hands locked behind her and was pulling her away.

"Cherry, you little hot pepper!" It was Art. "You don't *know* who that is!"

She turned around. "I—I don't?"

Her confounded victim had finally recovered and was brushing himself off.

"Who is this girl, Mr. Edson?" he asked.

Art hesitated, then shrugged futilely. "This is Miss O'Day . . . Cherry, Coordinator Barton. He got back from V-Port late yesterday."

"Miss O'Day," the man repeated thoughtfully. "This is a coincidence. I was just at your apartment."

"You—you were?" Cherry smiled weakly.



"I was hoping I could catch you before you checked out on your shift."

He straightened his coat and tie. "I thought I might find a way out of your difficulty."

"That's very kind —"

"As a matter of fact, I still think I might." He turned stiffly. "Drop by at my office and we'll talk it over — say, in five or six weeks?"

Rigidly, Cherry watched the Coordinator stride off. Then, numbly, she let Art lead her to the bus stop.

"That temper is going to get you into trouble one of these days." He shook his head solicitously.

She felt frustration and despair sweep over her; then, all at once, she was crying against his chest.

"Marry me," he pleaded. "Then they'll have to put us in the permanent residence quarters. I love you, Cherry."

She blinked up angrily into his face. "Prove it! Get that — that despicable thing out of my quarters!"

"Then will you marry me?"

She hesitated before giving him her twenty-first no. For a moment, she had remotely considered accepting — abandoning her plans for a pre-colonization career. After all, there wouldn't be anyone like Art around when she reached the top.

"I couldn't possibly marry you now, even if I wanted to. How could I be sure I wouldn't be doing it just to escape the man in my apartment?"

"All right, Cherry. I'll see what I can do about getting him out — even if it means sidestepping some of the regulations."

**B**UT Cherry was in no mood to wait until retribution, plodding at its customary snail's pace, caught up with her immaterial roommate — not if she could help it along.

At the end of her next recreation period, she waited on the handball court until she caught Madge reporting for physical culture before starting her day's work.

"Lend me your A-Displacement key," she urged.

Madge drew back. "Oh, no, you don't! If you're going to get in a jam, you're going to do it without my help. The Handbook says it's against regulations to swap Coefficients of Existence."

"But, Madge, don't you see that's the only way I can trap him — by cornering him in the apartment on *his* level of existence?"

The other girl's frown gave way to a mischievous grin. "Then you'll let him have it?"

"But good!"

Madge handed over the A-key.



"Good luck, kid!" she applauded.

Cherry had wasted almost an hour off-shift finding Madge. But that was to her advantage. It would give Mr. What's-His-Name time to get settled in the apartment before she descended on him.

She hurried back to the dormitory and through the CE stall. Displaced on the new A-level, she strode across the inner lobby. As she turned into the corridor where her quarters were located, she saw a tall, muscular man twisting the key in her lock and entering.

Quelling her anxiety, she slowed to give him a chance to become occupied so she could take him by complete surprise.

At the door, she waited another minute, then noiselessly let herself in. He was on the other side of the room, bending down over the Central Relay Receiver!

She crept across the carpet, sweeping up a straight-back chair as she advanced.

Then she let out a triumphant cry and started the chair swinging down toward her now-material adversary. In the final second before it struck, he started to turn around.

It was Art!

The chair crashed against him and he collapsed in front of the receiver.

Confounded, she stood staring

down at him, vaguely wondering . . .

No — the man's voice was a deep bass; Art's was a moderate baritone.

Then she was on her knees beside him as he sat up and shook his head groggily.

"Little hellcat," he muttered.

She steadied his head between her hands. "Art, darling — I didn't know . . . What were you doing?"

"Told you I'd see what I could manage," he mumbled. "Broke into the files to find out where your quarters were. Then got an A-Displacement key. Figured I'd catch him here. But he wasn't in, after all."

"He'll show up," she promised. "We'll get him!"

She seized his arm to help him up.

But he grunted in pain and grasped his shoulder. "Not now, we won't get him."

His fingers gingerly explored the lump on his head. "I — I — Say, you're A-Displacement too. How —"

He toppled over.

**I**N THE hospital, the doctor slipped out of his smock and came over to where Cherry stood anxiously in the corridor.

"You did a real good job on him," he said sarcastically.

"Is he badly hurt?" she asked.

"Slight concussion — plus a dis-



located shoulder — plus scalp lacerations.”

She started toward the room into which they had wheeled Art.

But the doctor stopped her. “He’s resting now. You won’t be able to see him until tomorrow.”

She started slowly across Rigel IV-Port base for the dormitory, realizing remorsefully that she might have seriously hurt Art . . . and all on account of the man in her apartment!

Her regret simmered into indignation and then deepened into a glowing rage as she hastened her steps. She covered the final block in a determined stride, her arms swinging and her fists clenched.

It had gone far enough! Now she would end it. And when she got through, this Whoever-He-Was would sorely regret the day he had moved in with her!

In the Displacement Booth, she used Madge’s key again, then went storming into her quarters.

“Come on out!” she challenged as she crossed the living room.

In the bedroom, she shouted, “Where are you?”

She swept into the kitchen. “I know you’re somewhere!”

But there was only silence.

She *had* used Madge’s A-key, hadn’t she?

Jerking open the closet door, she saw only his clothes on the rack — reassurance that she was

now on his level of existence.

But he was nowhere in the apartment.

Very well, then, she would find something to do until he arrived — like ripping his clothes to shreds and destroying all his personal effects.

She started with the top drawer of the dresser.

**A**RT sat up, speechless. “That’s what I said,” Cherry was repeating. “I’m in love with him.”

Groaning, he sank back down in the hospital bed.

“I hated him so much, I guess it backfired,” she explained. “Anyway, he’s the man I want to marry.”

He sprang upright again. “But you can’t do that!”

She paced, looking blithesomely at the ceiling. “It’s his aggressiveness — his forcefulness — the way he takes over. And he’s so good-natured all the time. Do you suppose he’ll want to marry me, Art?”

He swung his legs over the side of the bed and sent his feet groping for his slippers.

Smiling wistfully, she returned to the bedside. “Just think, he almost drove me into marrying you. Maybe I would have, if I hadn’t been afraid I was being forced into it to get away.”

“But — but, Cherry, you don’t understand! I love you! And —”



"He does, too. I know it. Besides, I've been living with him over a week."

"But he *doesn't* love you! I mean — look, you don't even know who he is!"

"Oh, but I do. Furthermore, I know he purposely *arranged* it so that he'd be A-Displacement but B-Shift. He was in a position to swing it that way."

"He what?"

"I went back to the apartment after I left here. I was going to tear up his clothes, just for spite." She reached into her handbag. "I found his identity card in the dresser."

She handed it to him.

He reached out with his good arm and pulled her to him. He didn't have to look at the photograph to know it was his own.

— DANIEL F. GALOUBE



## FORECAST

When Frederik Pohl and C. M. Kornbluth's two-part serial, *WOLF-BANE*, concludes next month, you'll have some idea of what a rocket battery feels like in action. Few menaces in the history of science fiction can match the Pyramid beings who have kidnapped the Earth — unaware that they are menaces; uncaring even if they had known, chillingly remote and yet immediately threatening every member of humanity — and totally invulnerable. Or is there such a thing as total invulnerability? Musn't there be a chink scmeewhere, however tiny? For instance, whoever harvests whatever is ripe is bound to pick something poisonous—but was a Son of the Wolf poisonous enough?

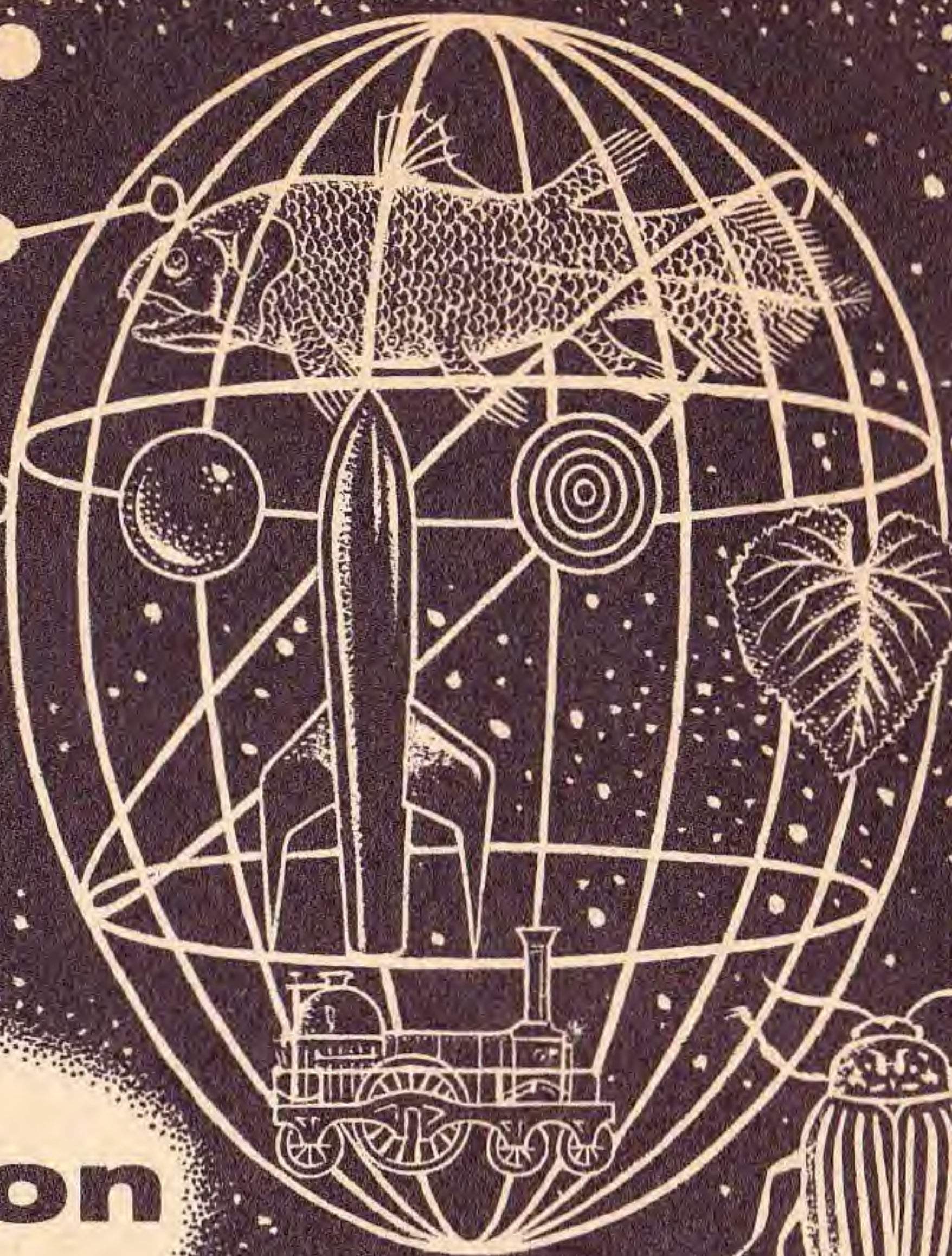
Jim Harmon returns with a novelet happily entitled *BREAK A LEG*. No irony intended — breakage is really the happiest thing that can happen; it's when there is no damage or disaster that this spaceship crew begins to worry. So will you when you see why.

*MORNING AFTER*, a Robert Sheckley novelet, has an equally startling problem. What is Piersen doing here — wherever here is? Will he live or die? For the answers to these and other questions, our hero has to keep tuning in on a hangover!

Along with short stories and our regular features, there's more to the exciting, frustrating, immensely rewarding quest that Willy Ley sets out on in this month's *FOR YOUR INFORMATION*. Don't step out of the safari when it's *ON WITH THE DODO HUNT!* — you may miss clues leading to one of the richest treasures of all time!



**for  
your  
information**

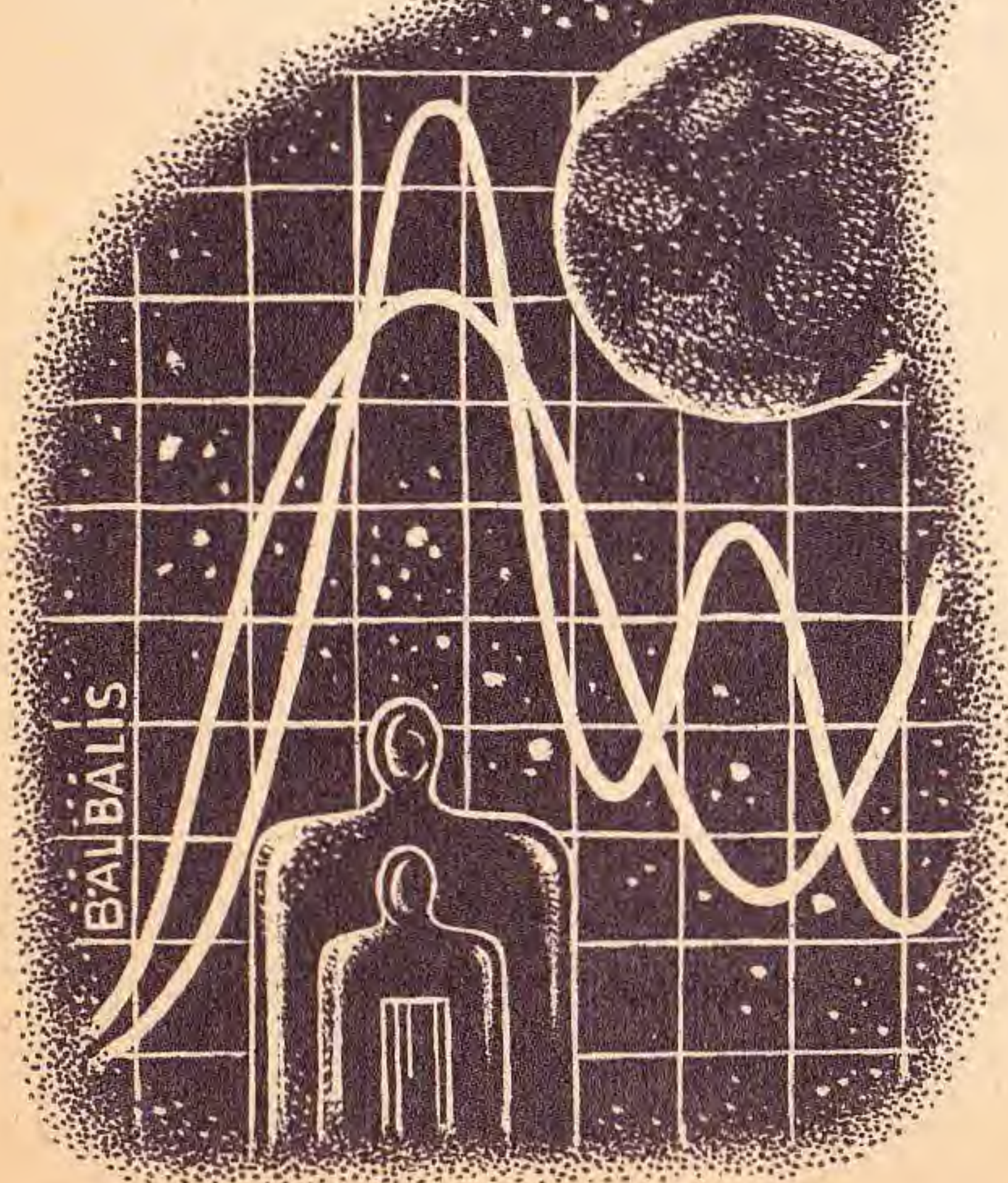


## Hunting Down the Dodo

By WILLY LEY

**O**NCE upon a time, there lived on the island of Mauritius a bird named the dodo, with the scientific name of *Didus ineptus*.

Come to think of it, this is not a good beginning. The story of the dodo is not a fairy tale but the truth, or as much truth as can still be established. Moreover, this first sentence is a very unscien-





tific oversimplification. Let's try to make it a bit more accurate. Then it will read just about like this:

From a period, the beginning of which cannot be ascertained, but which might be considered roughly equivalent to the beginning of the glacial age in higher latitudes, until about the year 1680 A.D., a large and flightless bird, classified as being the representative of a sub-order of the *Columbiformes* or pigeonlike birds, known to have existed on the island of Mauritius, or Zwaaneiland, also known as Ile de France, was called dodo, or dodaers, or dronte, but also *dinde sauvage*, *Walchvogel* or *gekapte Zwaan* (hooded swan) and several other names, with the scientific designation of either *Didus ineptus* or *Raphus cucullatus*, which are equivalent in scientific usage, but with *Raphus cucullatus* holding the chronological priority.

Well, now, this is more accurate.

It also complies with the order drilled into newspapermen: "Get all the facts into the first paragraph."

But I'm very much afraid it would probably be most intelligible to somebody who knows these facts already and who, logically, does not have much reason to read it at all.

I HAD better start over again, this time with the fundamentals. To the east of Madagascar, strung out along the 20th parallel of southern latitude, there are three reasonably large islands.

Their current names are Réunion, Mauritius and Rodriguez—at least, that's the way the name of the last appears on Admiralty charts, both British and American. For some unfathomable reason, the dependency of Rodrigues, when it makes an official report to the colony of Mauritius, spells its name with an "s" at the end. I am making a point of this difference in spelling for the sole reason that it happens to be the smallest of all the difficulties and discrepancies we are going to encounter. The more serious problems will come up later.

It is hard to say just who discovered these islands. There exists at least one old map on which the three islands have Arabic names. It is quite likely that Arab trading vessels did discover them, but without paying any special attention to their discovery, since the islands were uninhabited and it is exceedingly difficult to barter on uninhabited islands.

At any event, the Arabs did not even bother to locate the islands with any degree of care. On the map mentioned, they are



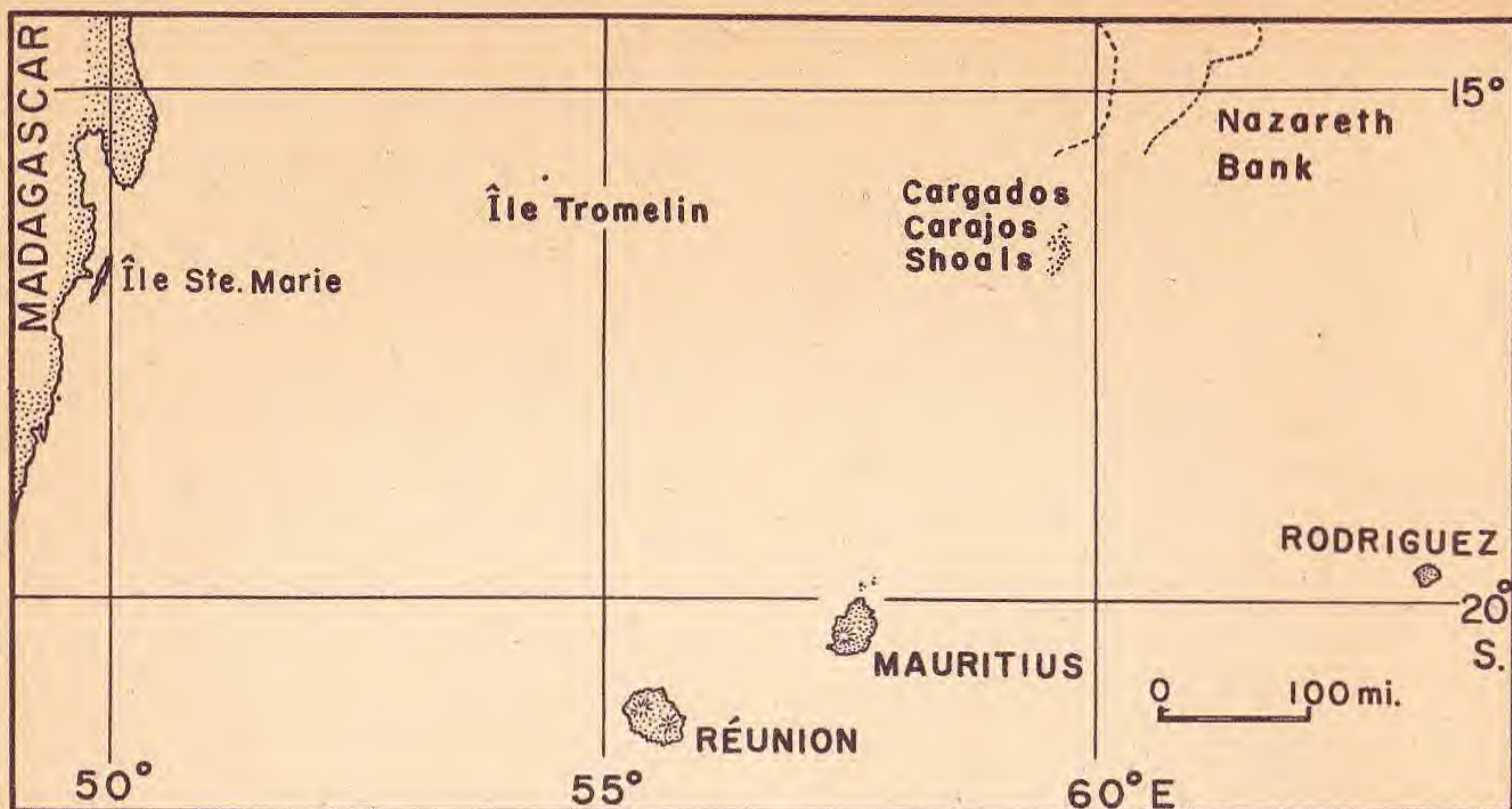


Fig. 1: Map of the Mascarene Islands with nearby shoals

drawn as forming an equilateral triangle and are placed far too close to Madagascar.

The first European discoverers were Portuguese but, strange to say, it was the second of the Portuguese discoverers who had his name attached to the islands.

The first one was Diogo Fernandes Pereira, who sailed these waters in 1507. On February 9th of that year, he found an island some 400 miles to the east of Madagascar which he named Santa Apollonia. It must have been the present Réunion. Soon after, his ship, the *Cerné*, sighted the present Mauritius. The navigator landed and named the island after his ship, as *Ilha do Cerne*.

This, I might say right here,

led to two different misunderstandings. Much later, around the middle of the nineteenth century, somebody who obviously did not know the name of Pereira's ship wondered why the navigator should have named the island after the island of Cerne, mentioned by Pliny the Elder. Wherever Pliny's Cerne was located, it could not be to the east of Madagascar.

The other misunderstanding took place quite soon after Pereira's voyage. Dutch explorers who came to Mauritius and knew the old name thought that Cerne was a miswriting for *cigne* (swan) and that Pereira had thought the dodos to be swans. The Dutch did not bother with the zoological problem involved; they "trans-



lated" Diogo Pereira's name into Dutch as *Zwaaneiland*.

Pereira, who was on his way to India, found Rodrigues later in the same year. It was first named Domingo Friz, but also Diego Rodriguez. The Dutch apparently found this hard to pronounce and talked about Diego Ruy's island, which then was Frenchified into Dygarroys — but the official French name for a time was Ile Marianne.

SIX years later came the second discoverer, Pedro Mascarenhas, who visited only Mauritius and Réunion. No name change was involved for Mauritius because of this rediscovery, but Santa Apollonia (Réunion) was renamed Mascarenhas or Mascaregne, and to this day the islands are called the Mascarene Islands.

The subsequent history of the islands was just about as complicated as this beginning. Réunion, the largest of the three islands, 970 square miles in extent, was officially annexed to France in 1638 by a Captain Goubert from Dieppe.

I don't know why one annexation was not considered sufficient, but the historical fact is that the annexation was repeated in the name of Louis XIII in 1643 and once more in 1649 by Etienne de Flacourt, who changed the name



*Manu Adriani Venny Pictoris*

Fig. 2: The dodo of Mauritius as sketched by Adrian van de Venne in 1626

from Mascarenhas to Ile Bourbon. After the French Revolution, that name had to go, of course, and Réunion was re-established. But then history can be read quite easily from the various changes, for it became Ile Bonaparte. Since 1848, it is again Réunion.

Considered non-politically, Réunion is a volcanic island with three rather tall peaks. The tallest is the Piton des Neiges, which measures 10,069 feet. The other high elevation is simply called Le Volcan by the inhabitants of the island, but Le Volcan has more than one peak. One, called Bory Crater, is 8,612 feet above sea level and extinct. The other crater, known as Fournaise, is only 8,294 feet tall but still active.



An island in such a location can grow tropical fruit and there are banana plantations and breadfruit trees, not to mention coconut palms. But these plants were introduced. The original vegetation included a dwarf bamboo, a variety of *casuarina* trees and a plant called by the trade name "red tacamahac," botanically *Calophyllum spurium*.

The second island, Mauritius, is somewhat smaller than Réunion (about 720 square miles) and likewise of volcanic origin. But all volcanic activity on Mauritius is a thing of the fairly distant past. The names of its three highest mountains reflect the changing ownership of the island

through the centuries. The highest one, 2711 feet, is called Black River Mountain. The second one, 2685 feet, is Mt. Pieter Botte, while the third, 2650 feet, is called Pouce.

The island is surrounded by coral reefs which a ship's captain has to know well, but it has a fine natural harbor. These two features prompted the Dutch to annex it in 1598 and they gave it its current name after Count Maurits of Nassau.

The Dutch abandoned Mauritius in 1710. For slightly more than a half a century (1715-1767), it was French and called Ile de France. In 1810, it was taken by the English, who

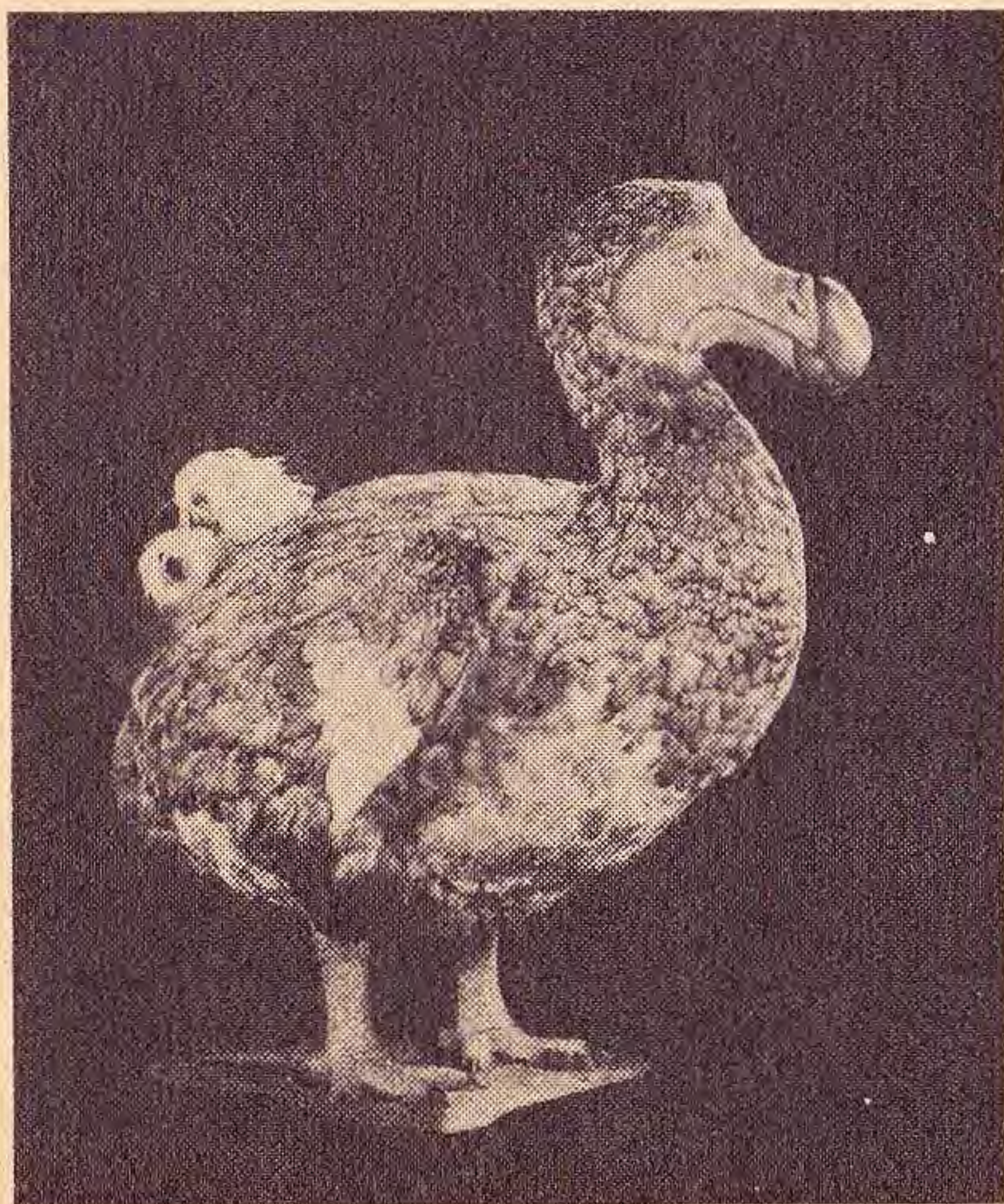


Fig. 3: Life-size restoration of the dodo of Mauritius in the American Museum of Natural History, New York



Fig. 4: Skeleton of the Mauritius dodo, assembled from sub-fossil bones

(Courtesy: AMNH)



restored the Dutch name.

Right now, Mauritius is a "spice island" where spices, pineapple, mangoes, avocados and bananas are grown, along with sugar cane. But the original vegetation is still represented by ironwood trees, ebony trees, traveler's trees and bamboo. Of course, domesticated animals were introduced on both islands, but Mauritius is somewhat special even in that respect — the deer that can be found there came from Java, not from Europe.

**A**S regards Rodriguez, its story is similar but shorter. Its extent is only 43 square miles. It is volcanic in origin, with 1300-foot Mt. Limon as its highest peak, and there is a fringing coral reef. The ownership of the island was Dutch, French and English in succession. In all cases, the first inhabitants were either deportees or people in voluntary exile, some of them mutineers, some refugees from religious intolerance.

Though all this had to be mentioned to establish a background, none of these facts would have made any of these islands famous. The only one which would enjoy a kind of restricted fame would be Mauritius, among stamp collectors, because of an early philatelic error which produced some of the rarest stamps in

existence. But these Mascarene Islands are famous because they once were the home of the dodo and related birds.

The story of the dodo (let's concentrate on the Mauritius dodo for the time being) looks rather simple, if somewhat sad, in rough outline. Its existence was first reported by Dutch navigators, who were far less thorough in their descriptions than one would now wish they had been. But they made up for this to some extent by bringing live specimens back with them to Europe. There they were painted, mostly by Dutch painters and, again it must be said, not as well as one would now wish.

But the major blunder was committed in England. About 1637, give or take a year, a live Mauritius dodo arrived in England. It lived there for quite some time, and after its death, it was "stuffed" (badly, no doubt) and found a place in Tradescant's Museum in London in 1656. A few decades later, the stuffed dodo was transferred to the Ashmolean Museum at Oxford. This was in 1683 — as we now know, two years after the last report of a live dodo on Mauritius was put on paper by one Benjamin Harry.

In 1755, the curator of the Ashmolean Museum decided that the moth-eaten old skin was a disgrace to his fine collection and



ordered that it be thrown away to be burned with other trash. At the last moment, somebody wrenched off the head (partly decayed) and one foot (in good condition). They are now about the rarest items on record.

**E**VEN this outline story contains one more surprising item. The first scientist to include the dodo as an exotic bird in a book on natural history was Carolus Clusius in 1605. Later, Carolus Linnaeus gave it a scientific name, and quite naturally the dodo entered into the zoological works of Buffon in France and Blumenbach in Germany.

But by 1800, nobody had ever seen a dodo. The available paintings did not seem convincing. They looked like caricatures to begin with and did not even agree with each other.

Some scientists, bent on a housecleaning in scientific literature, began to doubt whether there had ever been such a bird. Maybe it was all a misunderstanding, if not worse, and the descriptions had meant the cassowary.

At any event J. S. Duncan of Oxford felt obliged, in 1828, to write a paper with the title: "A summary review of the authorities on which naturalists are justified in believing that the Dodo, *Raphus cucullatus* (*Didus ineptus*), was a bird existing in the

Isle of France, or the neighbouring islands, until a recent period." Mr. Duncan can be said to have saved the dodo from secondary extinction in scientific literature.

But let's go back now to the original sources. The first man to write about the dodo was the Dutch Admiral Jacob Corneliszoon van Neck, who went to Mauritius with eight ships. Four of them returned to Holland in 1599, the other four in 1601. Admiral van Neck's narrative appeared in Dutch in 1601 and translations into English, French and Latin were printed during the same year, a German translation one year later.

In spite of this volume of printed matter, there are still a number of question marks. The original journal, presumably written on shipboard, was enlarged for publication — we don't know whether by the admiral himself or by an editor. Moreover, one old naturalist, who did not leave Europe, gave a dodo picture which, he said, was copied from Admiral van Neck's journal. But this picture cannot be found in any known edition of the journal.

The passage in the admiral's journal in which the dodo is first mentioned reads:

Blue parrots are very numerous there [referring to Mauritius] as



well as other birds; among which are a kind, conspicuous for their size, larger than our swans, with huge heads only half covered with skin, as if clothed with a hood. These birds lack wings, in the place of which three or four blackish feathers protrude. The tail consists of a few soft incurved feathers which are ash-colored. These we used to call *Walghvogels* for the reason that the more and the longer they were cooked, the less soft and more insipid eating they became. Nevertheless, their belly and breast were of a pleasant flavor and easily masticated.

THE Dutch word *Walghvogels* (also spelled *Walchvogels*) translates literally as "nauseating birds," but it led to one of the many mistakes that crowd the dodo's short life history.

About two hundred years later, it was asserted in German books that there had been Forest Birds, so named, on Mauritius. There probably were, and still are, forest birds on Mauritius, but the Forest Bird was only a sloppy translation, appearing in its German form of *Waldvogel*. Spelling in those days was helter-skelter in any language, so somebody probably thought that "walgh" was just a poor rendering of "Waldt," a then frequent spelling of the German word *Wald*, which means forest.

Since this has raised the problem of the name of the bird, it

might be just as well to clear up this additional difficulty as much as possible.

In the most recent specialized professional work on the dodo, by the Marquis Masauji Hachisuka, not less than seventy-nine different names are listed. But the confusion is not quite as large as this figure seems to indicate, for the names clearly fall into a small number of classes.

One set of them tries to be descriptive. They are mostly French, as, for example, *austruche encapuchonné* (hooded ostrich), *cygne capuchonné* (hooded swan) and *dinde sauvage* (wild turkey). Another set are either translations or mistranslations of Dutch names. The Dutch names themselves are either variations on the theme of *walghvogels* or else descriptive terms similar to the French names just mentioned.

Just two words emerge as, so to speak, "exclusive" terms. One is the name *dodo*, with the variations *dodaars* and *dodaerts*, and the other one is *dronte*.

It is reasonably certain that "dodo" is a name coined by the Portuguese, as witness a letter written in 1628 by Emanuel Altham about "very strange fowles called by ye portingals Do Do."

The fact that Altham pulled the two syllables apart, thereby changing their pronunciation, is "very suspicious-making," as a



French lady I know phrased it. It is so suspicious — or, rather, indicative — because old Dutch and German writings spell the name as *doedoe* and *dudu*, all of which must be pronounced “doo-doo.” Since it has no real meaning in any language, it can well be, as has been asserted, an imitation of the bird’s call.

The Dutch variation *dod-aars* or *dod-aers* is rather clear to an English speaker, especially in view of the Dutch descriptive remarks *ende heeft een rond gat* (“and has a round rump,” as van Neck put it) or *rond van stuiten* (“round of stern,” as Capt. Willem van West-Zanen wrote in 1602).

**H**OWEVER, the name *dronte*, which in Dutch and in German was used about equally frequently as *dodo*, still is not explained. The Englishman H. E. Strickland, who wrote the first book about the dodo in 1848, and it is still good, accepted the explanation that this term was coined by Danish sailors, using their verb *drunte*, which means “to be slow.” This is not only somewhat far-fetched on the face of it, for the Danes, for a change, have not contributed anything to the story of this bird; it is not even necessarily correct. We simply don’t know whether the dodo was slow and the evidence

is not very much in favor of this assumption.

The Dutch zoologist Prof. A. C. Oudemans—yes, the man who wrote the 600-page book on the Sea Serpent—has pointed out—in another book devoted to the dodo only—that there was a now obsolete Middle-Dutch verb *dronten*. Its meaning was “bloated” or “swollen,” which sounds much more reasonable. But Prof. Oudemans could not prove that this was actually the derivation; a lot of early writings on the dodo seem to be lost.

The records are incomplete also as regards the number of birds taken away alive. If it were not for a chance mention in Peter Mundy’s journal—he served with the East India Company from 1628 to 1634—we would never know that two of them were brought to India. But his statement is definite: “Dodoes, a strange kind of fowle, twice as big as a Goose, that can neither flye nor swimm, being Cloven footed; I saw two of them in Suratt [the first British settlement in India, started 1612] house that were brought from thence [Mauritius].”

There is a similar chance mention about one having been sent to Japan, but Japanese scientists have failed, in spite of much effort, to trace its fate from Japanese chronicles and books.



Going by such remarks on the one hand and, on the other hand, by sketches and paintings stated or reported to have been made from life, Dr. Hachisuka listed a total of twelve specimens of the Mauritius dodo as having arrived in Europe: one in Italy, two in England and nine—five males and four females—in Holland.

In other books, particularly in works which treat the paintings as paintings instead of as ornithological illustrations, larger figures are usually mentioned. This is partly due to counting sketches and paintings made from earlier paintings. Mostly, however, it is due to the fact that no distinction is made between the gray Mauritius dodo and similar birds from the other two Mascarene Islands.

**B**UT no list, whether of specimens or of paintings, can be considered final. In 1914 and 1915, a German scientist, Dr. S. Killermann, set out on a systematic dodo hunt in museums, libraries and art galleries and discovered about half a dozen pictures that had simply been overlooked before. Killermann's feat could probably be repeated by somebody today with the inclination and the necessary time and money.

As has been mentioned, the Clusius picture has been copied

from a lost original of van Neck's journal. Somebody might still find it. Similarly, it is known that an unnamed artist on board of one of the ships commanded by Admiral Wolphart Harmanszoon made several drawings from life while the ship was in Mauritius harbor in 1602. The originals are now "lost," but somebody might find them.

Likewise, one of the several oil paintings of dodos made by Roelandt Savery is listed as lost.

In short, while a dodo investigation is no longer virgin territory, it is still a fertile field with possibilities for a diligent researcher.

One of the earliest and best pictures of a Mauritius dodo drawn from life is the pen-and-ink drawing by Adrian van de Venne. It was made in 1626 and shows a male. This is what we now think of as the normal appearance of the dodo. However, it was Prof. Oudemans who first realized that the dodo must have had two "normal appearances"—one fat stage and one gaunt stage. This assumption explains many old sketches which look like caricatures; the latter impression is considerably strengthened by the fact that a number of sketches were made while the birds were moulting.

Oudemans' idea makes it possible to arrange all these sketches



in a logical sequence, pre-moulting, at the height of the moult, post-moulting, fat and gaunt. But why a bird on a tropical island, where the food supply should be more or less the same all year round, should go through a gaunt stage at regular intervals is not yet fully explained.

The Mauritius dodo became extinct between 1681, the last time it is mentioned as living, and 1693, the first time it fails to appear on a list of the animals and birds of the island made on the spot. By 1750, the people living on the island did not even know any more that there had been such a bird.

A hundred years later, there lived a man on Mauritius who was an ardent naturalist. This man, George Clark, not only knew about the dodo, but was determined to find dodo remains. They had to be somewhere on the island, for the entire species could not possibly have become extinct without leaving traces. But where would these traces be located?

At first glance, the situation did not look too promising. "In fact," George Clark wrote, "there is no part of Mauritius where the soil is of such a nature as to render probable the accidental interment of substances thrown upon it. It may be classed under four heads: stiff clay; large masses of

stone forming a chaotic surface; strata of melted lava, locally called *pavés*, impervious to everything; and loam, intermixed with fragments of vesicular basalt—the latter too numerous and too thickly scattered to allow anything to sink into the mass by the mere force of gravity. Besides this, the tropical rains, of which the violence is well known, sweep the surface of the earth in many places with a force sufficient to displace stones of several hundred pounds weight."

AFTER having reached this point, Clark all of a sudden had a new idea. If these tropical rains swept everything before them, where did they sweep it? Well, there was a kind of delta formed by three rivers running into the harbor of Mahébourg. If dodo bones had been washed into one of the rivers, this was the likely place where they might have come to rest. One part of that delta was a marsh known locally as *le Mare aux Songes*. Mr. Clark promised himself that he would dig there, as soon as he had the time and some means to pay laborers for the actual work.

About 1863, he began to dig, finding large numbers of dodo bones at the very bottom of the marsh, to the delight of anatomists, and to the intense aston-



ishment of aged creoles who were standing around and were somewhat annoyed by seeing something on their own island which they had not known about. As a result of George Clark's successful digging, there is no doubt about the dodo's skeleton. As a matter of fact, it was this material which helped to unravel such problems as were posed by the sketches of artists who did not know anatomy — at any rate, not bird anatomy.

And while no museum can have an authentic dodo, several museums can, at least, boast authentic dodo skeletons, like the one at the Smithsonian Institution which was put together by Norman H. Boss.

The American Museum of Natural History in New York

has such a skeleton, too, but it also has something which makes casual visitors wonder whether a dried skin might have survived somewhere.

The museum has a restoration, made in the taxidermy studios of Rowland Ward in London. The feet and the head are copied from the preserved specimens. The feathers are those of other birds, correct in color and, as far as can be ascertained, correct in shape. The dodo is in the fat stage, the one we know best from pictures.

Well, this is the somewhat sporadic story of the gray dodo of Mauritius. But there are two more Mascarene Islands and they had dodolike birds, too. We'll go into *that* story in the next issue.

—WILLY LEY



**"How do you know you haven't been in space opera?  
How do you know you aren't a crashed saucer-jockey?"**

**Who were you anyhow?**

**Send \$3.00 to Box 242, SA, Silver Spring, Maryland for  
your copy of "History of Man" by L. Ron Hubbard."**



**To commit the flawless crime, all Barthold needed were centuries in which to plan and execute it — and an insurance policy with —**

## **double**

**E**VERETT Barthold didn't take out a life insurance policy casually. First he read up on the subject, with special attention to Breach of Contract, Willful Deceit, Temporal Fraud, and Payment. He checked to find how closely insurance

companies investigated before paying a claim. And he acquired a considerable degree of knowledge on Double Indemnity, a subject which interested him acutely.

When this preliminary work was done, he looked for an insurance company which would





# indemnity

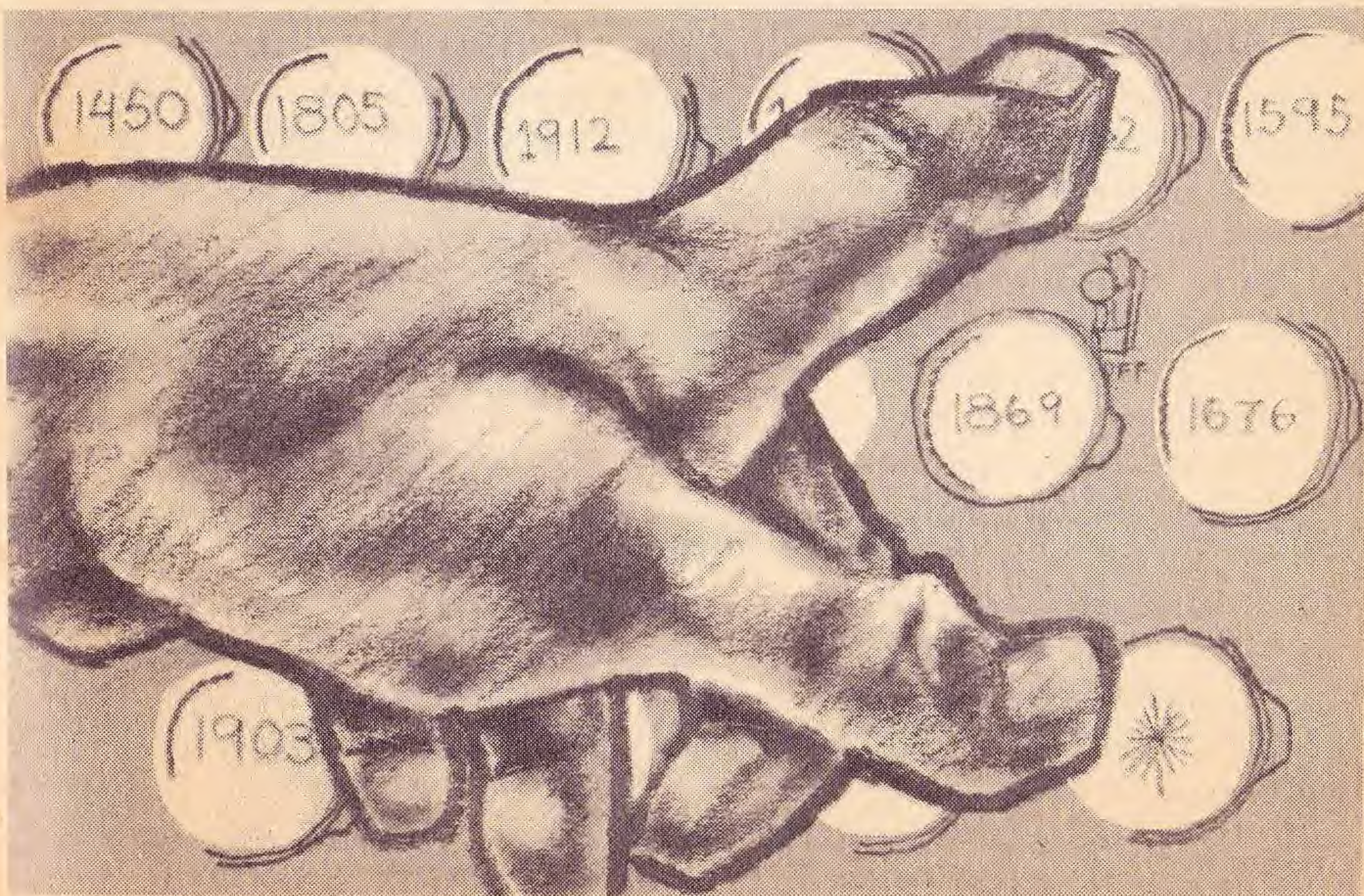
By ROBERT SHECKLEY

Illustrated by DILLON

suit his needs. He decided, finally, upon the Inter-Temporal Insurance Corporation, with its main office in Hartford, Present Time. Inter-Temporal had branch offices in the New York of 1959, Rome, 1530, and Constantinople, 1126. Thus they offered full tem-

poral coverage. This was important to Barthold's plans.

Before applying for his policy, Barthold discussed the plan with his wife. Mavis Barthold was a thin, handsome, restless woman, with a cautious, contrary feline nature.





"It'll never work," she said at once.

"It's foolproof," Barthold told her firmly.

"They'll lock you up and throw away the key."

"Not a chance," Barthold assured her. "It can't miss — if you cooperate."

"That would make me an accessory," said his wife. "No, darling."

"My dear, I seem to remember you expressing a desire for a coat of genuine Martian scart. I believe there are very few in existence."

**M**RS. Barthold's eyes glittered. Her husband, with canny accuracy, had hit her weak spot.

"And I thought," Barthold said carelessly, "that you might derive some pleasure from a new Daimler hyper-jet, a Letti Det wardrobe, a string of matched roomstones, a villa on the Venusian Riviera, a —"

"Enough, darling!" Mrs. Barthold gazed fondly upon her enterprising husband. She had long suspected that within his unprepossessing body beat a stout heart. Barthold was short, beginning to bald, his features ordinary, and his eyes were mild behind horn-rimmed glasses. But his spirit would have been perfectly at home in a pirate's great-muscled frame.

"Then you're sure it will work?" she asked him.

"Quite sure, if you do what I tell you and restrain your fine talent for overacting."

"Yes, dear," said Mrs. Barthold, her mind fixed upon the glitter of roomstones and the sensuous caress of scart fur.

Barthold made his final preparations. He went to a little shop where some things were advertised and other things sold. He left, several thousand dollars poorer, with a small brown suitcase tucked tightly under his arm. The money was untraceable. He had been saving it, in small bills, for several years. And the contents of the brown suitcase were equally untraceable.

He deposited the suitcase in a public storage box, drew a deep breath and presented himself at the offices of the Inter-Temporal Insurance Corporation.

For half a day, the doctors poked and probed at him. He filled out the forms and was brought, at last, to the office of Mr. Gryns, the regional manager.

Gryns was a large, affable man. He read quickly through Barthold's application, nodding to himself.

"Fine, fine," he said. "Everything seems to be in order. Except for one thing."

"What's that?" Barthold asked,



his heart suddenly pounding.

"The question of additional coverage. Would you be interested in fire and theft? Liability? Accident and health? We insure against everything from a musket ball to such trivial but annoying afflictions as the very definitely common cold."

"Oh," said Barthold, his pulse rate subsiding to normal. "No, thank you. At present, I am concerned only with a life insurance policy. My business requires me to travel through time. I wish adequate protection for my wife."

"Of course, sir, absolutely," Gryns said. "Then I believe everything is in order. Do you understand the various conditions that apply to this policy?"

"I think I do," replied Barthold, who had spent months studying the Inter-Temporal standard form.

"The policy runs for the life of the assured," said Mr. Gryns. "And the duration of that life is measured only in subjective physiological time. The policy protects you over a distance of 1000 years on either side of the Present. But no further. The risks are too great."

"I wouldn't dream of going any further," Barthold said.

"And the policy contains the usual double indemnity clause. Do you understand its function and conditions?"

"I believe so," answered Barthold, who knew it word for word.

"All in order, then. Sign right here. And here. Thank you, sir."

"Thank you," said Barthold. And he really meant it.

**B**ARTHOLD returned to his office. He was sales manager for the Alpro Manufacturing Company (Toys for All the Ages). He announced his intention to leave at once on a sales tour of the Past.

"Our sales in time are simply not what they should be," he said. "I'm going back there myself and take a personal hand in the selling."

"Marvellous!" cried Mr. Carlisle, the president of Alpro. "I've been hoping for this for a long time, Everett."

"I know you have, Mr. Carlisle. Well, sir, I came to the decision just recently. Go back there yourself, I decided, and find out what's going on. Went out and made my preparations and now I'm ready to leave."

Mr. Carlisle patted him on the shoulder. "You're the best salesman Alpro ever had, Everett. I'm very glad you decided to go."

"I am, too, Mr. Carlisle."

"Give 'em hell! And by the way —" Mr. Carlisle grinned slyly — "I've got an address in Kansas City, 1895, that you might be interested in. They just don't



build 'em that way any more. And in San Francisco, 1840, I know a —

"No, thank you, sir," Barthold said.

"Strictly business, eh, Everett?"

"Yes, sir," Barthold said, with a virtuous smile. "Strictly business."

Everything was in order now. Barthold went home and packed and gave his wife her last instructions.

"Remember," he told her, "when the time comes, act surprised, but don't simulate a nervous breakdown. Be confused, not psychotic."

"I know," she said. "Do you think I'm stupid or something?"

"No, dear. It's just that you *do* have a tendency to wring every bit of emotion out of situations. Too little would be wrong. So would too much."

"Honey," said Mrs. Barthold in a very small voice.

"Yes?"

"Do you suppose I could buy one little roomstone now? Just one to sort of keep me company until —"

"No! Do you want to give the whole thing away? Damn it all, Mavis —"

"All right. I was only asking. Good luck, darling."

"Thank you, darling."

They kissed.

And Barthold left.

HE reclaimed his brown suitcase from the public storage box. Then he took a heli to the main showroom of Temporal Motors. After due consideration, he bought a Class A Unlimited Flipper and paid for it in cash.

"You'll never regret this, sir," said the salesman, removing the price tag from the glittering machine. "Plenty of power in this baby! Double impeller. Full control in all years. No chance of being caught in stasis in a Flipper."

"Fine," Barthold said. "I'll just get in and —"

"Let me help you with those suitcases, sir. You understand that there is a federal tax based upon your temporal milage?"

"I know," Barthold said, carefully stowing his brown suitcase in the back of the Flipper. "Thanks a lot. I'll just get in and —"

"Right, sir. The time clock is set at zero and will record your jumps. Here is a list of time zones proscribed by the government. Another list is pasted to the dashboard. They include all major war and disaster areas, as well as Paradox Points. There is a federal penalty for entering a proscribed area. Any such entry will show on the time clock."

"I know all this." Barthold suddenly was very nervous. The salesman couldn't suspect, of



course. But why was he going on gabbling so about breaches of the law?

"I am required to tell you the regulations," the salesman said cheerfully. "Now, sir, in addition, there is a thousand-year limit on time jumps. No one is allowed beyond that, except with written permission from the State Department."

"A very proper precaution," Barthold said, "and one which my insurance company has already advised me of."

"Then that takes care of everything. Pleasant journey, sir! You'll find your Flipper the perfect vehicle for business or pleasure. Whether your destination is the rocky roads of Mexico, 1932, or the damp tropics of Canada, 2308, your Flipper will see you through."

Barthold smiled woodenly, shook the salesman's hand and entered the Flipper. He closed the door, adjusted his safety belt, started the motor. Leaning forward, teeth set, he calibrated his jump.

Then he punched the send-off switch.

A gray nothingness surrounded him. Barthold had a moment of absolute panic. He fought it down and experienced a thrill of fierce elation.

At last, he was on his way to fortune!

**I**MPENETRABLE grayness surrounded the Flipper like a faint and endless fog. Barthold thought of the years slipping by, formless and without end, gray world, gray universe . . .

But there was no time for philosophical thoughts. Barthold unlocked the small brown suitcase and removed a sheaf of typed papers. The papers, gathered for him by a temporal investigation agency, contained a complete history of the Barthold family, down to its earliest origins.

He had spent a long time studying that history. His plans required a Barthold. But not just any Barthold. He needed a male Barthold, 38 years old, unmarried, out of touch with his family, with no close friends and no important job. If possible, with no job at all.

He needed a Barthold who, if he suddenly vanished, would never be missed, never searched for.

With those specifications, Barthold had been able to cut thousands of Bartholds out of his list. Most male Bartholds were married by the age of 38. Some hadn't lived that long. Others, single and unattached at 38, had good friends and strong family ties. Some, out of contact with family and friends, were men whose disappearance would be investigated.



After a good deal of culling, Barthold was left with a mere handful. These he would check, in the hope of finding one who suited all his requirements . . .

If such a man existed, he thought, and quickly banished the thought from his mind.

After a while, the grayness dissolved. He looked out and saw that he was on a cobblestone street. An odd, high-sided automobile chugged past him, driven by a man in a straw hat.

He was in New York, 1912.

**T**HE first man on his list was Jack Barthold, known to his friends as Bully Jack, a journeyman printer with a wandering eye and a restless foot. Jack had deserted his wife and three children in Cheyenne in 1902, with no intention of returning. For Barthold's purposes, this made him as good as single. Bully Jack had served a hitch with General Pershing, then returned to his trade. He drifted from print shop to print shop, never staying long. Now, at the age of 38, he was working somewhere in New York.

Barthold started at the Battery and began hunting his way through New York's print shops. At the eleventh one, on Water Street, he located his man.

"You want Jack Barthold?" an old master printer asked him.

"Sure, he's in the back. Hey, Jack! Fellow to see you!"

Barthold's pulse quickened. A man was coming toward him, out of the dark recesses of the shop. The man approached, scowling.

"I'm Jack Barthold," he said. "Whatcha want?"

Barthold looked at his relative and sadly shook his head. This Barthold obviously would not do.

"Nothing," he said, "nothing at all." He turned quickly and left the shop.

Bully Jack, five foot eight inches tall and weighing two hundred and ninety pounds, scratched his head.

"Now what in hell was all that about?" he asked.

The old master printer shrugged his shoulders.

Everett Barthold returned to his Flipper and reset the controls. A pity, he told himself, but a fat man would never fit into his plans.

**H**IS next stop was Memphis, 1869. Dressed in an appropriate costume, Barthold went to the Dixie Belle Hotel and inquired at the desk for Ben Bartholder.

"Well, suh," said the courtly white-haired old man behind the desk, "his key's in, so I reckon he's out. You might find him in the corner saloon with the other



trashy carpetbaggers."

Barthold let the insult pass and went to the saloon.

It was early evening, but the gaslights were already blazing. Someone was strumming a banjo and the long mahogany bar was crowded.

"Where could I find Ben Bartholder?" Barthold asked a bartender.

"Ovah theah," the bartender said, "with the other Yankee drummers."

Barthold walked over to a long table at one end of the saloon. It was crowded with flashily dressed men and painted women. The men were obviously Northern salesmen, loud, self-confident and demanding. The women were Southerners. But that was their business, Barthold decided.

As soon as he reached the table, he spotted his man. There was no mistaking Ben Bartholder.

He looked exactly like Everett Barthold.

And that was the vital characteristic Barthold was looking for.

"Mr. Bartholder," he said, "might I have a word with you in private?"

"Why not?" said Ben Bartholder.

Barthold led the way to a vacant table. His relative sat opposite him, staring intently.

"Sir," said Ben, "there is an

uncanny resemblance between us."

"Indeed there is," replied Barthold. "It's part of the reason I'm here."

"And the other part?"

"I'll come to that presently. Would you care for a drink?"

Barthold ordered, noticing that Ben kept his right hand in his lap, out of sight. He wondered if that hand held a derringer. Northerners had to be wary in these Reconstructionist days.

After the drinks were served, Barthold said, "I'll come directly to the point. Would you be interested in acquiring a rather large fortune?"

"What man wouldn't?"

"Even if it involved a long and arduous journey?"

"I've come all the way from Chicago," Ben said. "I'll go farther."

"And if it comes to breaking a few laws?"

"You'll find Ben Bartholder ready for anything, sir, if there's some profit to it. But who are you and what is your proposition?"

"Not here," Barthold said. "Is there some place where we can be assured of privacy?"

"My hotel room."

"Let's go, then."

Both men stood up. Barthold glanced at Ben's right hand and gasped.



Benjamin Bartholder had no right hand.

"Lost it at Vicksburg," explained Ben, seeing Barthold's shocked stare. "It doesn't matter. I'll take on any man in the world with one hand and a stump — and lick him!"

"I'm sure of it," Barthold said a little wildly. "I admire your spirit, sir. Wait here a moment. I — I'll be right back."

Barthold hurried out of the saloon's swinging doors and went directly to his Flipper. A pity, he thought, setting the controls. Benjamin Bartholder would have been perfect.

But a maimed man wouldn't fit into his plan.

**T**HE next jump was to Prussia, 1676. With a hypnoed knowledge of German and clothes of suitable shape and hue, he walked the deserted streets of Konigsberg, looking for Hans Baerthaler.

It was midday, but the streets were strangely, eerily deserted. Barthold walked and finally encountered a monk.

"Baerthaler?" mused the monk. "Oh, you mean old Otto the tailor! He lives now in Ravensburg, good sir."

"That must be the father," Barthold said. "I seek Hans Baerthaler, the son."

"Hans . . . Of course!" The

monk nodded vigorously, then gave Barthold a quizzical look. "But are you sure that's the man you want?"

"Quite sure," Barthold said. "Could you direct me to him?"

"You can find him at the cathedral," said the monk. "Come, I'm going there myself."

Barthold followed the monk, wondering if his information could be wrong. The Baerthaler he sought wasn't a priest. He was a mercenary soldier who had fought all over Europe. His type would never be found at a cathedral — unless, Barthold thought with a shudder, Baerthaler had unreportededly acquired religion.

Fervently he prayed that this wasn't so. It would ruin everything.

"Here we are, sir," the monk said, stopping in front of a noble, soaring structure. "And there is Hans Baerthaler."

Barthold looked. He saw a man sitting on the cathedral steps, a man dressed all in rags. In front of him was a shapeless old hat and within the hat were two copper coins and a crust of bread.

"A beggar," Barthold grunted disgustedly. Still, perhaps . . .

He looked closer and noticed the blank, vacuous expression in the beggar's eyes, the slack jaw, the twisted, leering lips.



"A great pity," the monk said. "Hans Baerthaler received a head wound fighting against the Swedes at Fehrbellin and never recovered his senses. A terrible pity."

Barthold nodded, looking around at the empty cathedral square, the deserted streets.

"Where is everyone?" he asked.

"Why, sir, surely you must know! Everyone has fled Konigsberg except me and him. It is the Black Plague!"

With a shudder, Barthold turned and raced back through the empty streets, to his Flipper, his antibiotics, and to any other year but this one.

WITH a heavy heart and a sense of impending failure, Barthold journeyed again down the years, to London, 1595. At Little Boar Taverne near Great Hertford Cross, he made inquiry of one Thomas Barthal.

"And what would ye be wanting Barthal for?" asked the publican, in English so barbarous that Barthold could barely make it out.

"I have business with him," said Barthold in his hypnoed Old English.

"Have you indeed?" The publican glanced up and down at Barthold's ruffed finery. "Have you really now?"

The tavern was a low, noisome place, lighted only by two guttering tallow candles. Its customers, who now gathered around Barthold and pressed close to him, looked like the lowest riff-raff. They surrounded him, still gripping their pewter mugs, and Barthold detected, among their rags, the flash of keener metal.

"A nark, eh?"

"What in hell's a nark doing in here?"

"Daft, perhaps."

"Past a doubt, to come alone."

"And asking us to give um poor Tom Barthal!"

"We'll give um something, lads!"

"Ay, let's give um!"

The publican watched, grinning, as the ragged crowd advanced on Barthold, their pewter mugs held like maces. They backed him past the leaded windows, against the wall. And only then did Barthold fully realize the danger he faced in this unruly pack of vagabonds.

"I'm no nark!" he cried.

"The hell you say!" The mob pressed forward and a heavy mug crashed against the oak wall near his head.

With a sudden inspiration, Barthold swept off his great plumed hat. "Look at me!"

They stopped, gazing at him open-mouthed.

"The perfect image of Tom



Barthal!" one gasped.

"But Tom never said he had a brother," another pointed out.

"We were twins," Barthold said rapidly, "separated at birth. I was raised in Normandy, Aquitaine and Cornwall. I found out only last month that I had a twin brother. And I'm here to meet him."

It was a perfectly creditable story for 16th century England and the resemblance could not be gainsaid. Barthold was brought to a table and a mug of ale set before him.

"You've come late, lad," an ancient one-eyed beggar told him. "A fine worker he was and a clever one at prigging a prancer —"

Barthold recognized the old term for horse thief.

"— but they took him at Aylesbury, and tried him with the hookers and the freshwater marines, and found him guilty, worse luck."

"What's his fine?" Barthold asked.

"A severe one," said a stocky rogue. "They're hanging him to-day at Shrew's Marker!"

**B**ARTHOLD sat very still for a moment. Then he asked, "Does my brother really look like me?"

"The spitting image!" exclaimed the publican. "It's uncan-

ny, man, and a thing to behold. Same looks, same height, same weight — everything the same!"

The others nodded their agreement. And Barthold, so close to success, decided to risk all. He *had* to have Tom Barthal!

"Now listen close to me, lads," he said. "You have no love for the narks or the London law, do you? Well, I'm a rich man in France, a very rich man. Would you like to come there with me and live like barons? Aye, take it easy — I knew you would. Well, we can do it, boys. But we have to bring my brother, too."

"But how?" asked a sturdy tinker. "They're hanging him this day!"

"Aren't you men?" demanded Barthold. "Aren't you armed? Wouldn't you dare strike out for fortune and a life of ease?"

They shouted their assent.

Barthold said, "I thought you'd be keen. You can. All you have to do is follow my instructions."

Only a small crowd had gathered at Shrew's Marker, for it was a small and insignificant hanging. Still, it afforded some amusement and the people cheered lustily as the horse-drawn prisoner's wagon rumbled over the cobbled streets and drew to a halt in front of the gibbet.

"There's Tom," murmured the tinker, at the edge of the crowd. "See him there?"



"I think so," Barthold said. "Let's move in."

He and his fifteen men pushed their way through the crowd, circling the gibbet. The hangman had already mounted the platform, had gazed over the crowd through the eye-slits in his black mask, and was now testing his rope. Two constables led Tom Barthol up the steps, positioned him, reached for the rope . . .

"Are you ready?" the publican asked Barthold. "Hey! Are you ready?"

Barthold was staring, open-mouthed, at the man on the platform. The family resemblance was unmistakable. Tom Barthol looked exactly like him — except for one thing.

Barthal's cheeks and forehead were deeply pitted with smallpox scars.

"Now's the moment for the rush," the publican said. "Are you ready, sir? Sir? *Hey!*"

He whirled and saw a plumed hat duck out of sight into an alley.

He started to give chase, but stopped abruptly. From the gibbet he heard a hiss, a stifled scream, a sodden thud. When he turned again, the plumed hat was out of sight.

Everett Barthold returned to his Flipper, deeply depressed. A disfigured man would not fit his plan.

**I**N the Flipper, Barthold thought long and seriously. Things were going badly, very badly indeed. He had searched through time, all the way to medieval London, and had found no Barthold he could use. Now he was nearing the thousand-year limit.

He could go no further —  
Not legally.

But legality was a matter of proof. He couldn't—he *wouldn't*—turn back now.

There had to be a usable Barthold somewhere in time!

He unlocked the small brown suitcase and took from it a small, heavy machine. He had paid several thousand dollars for it, back in Present Time. Now it was worth a lot more to him.

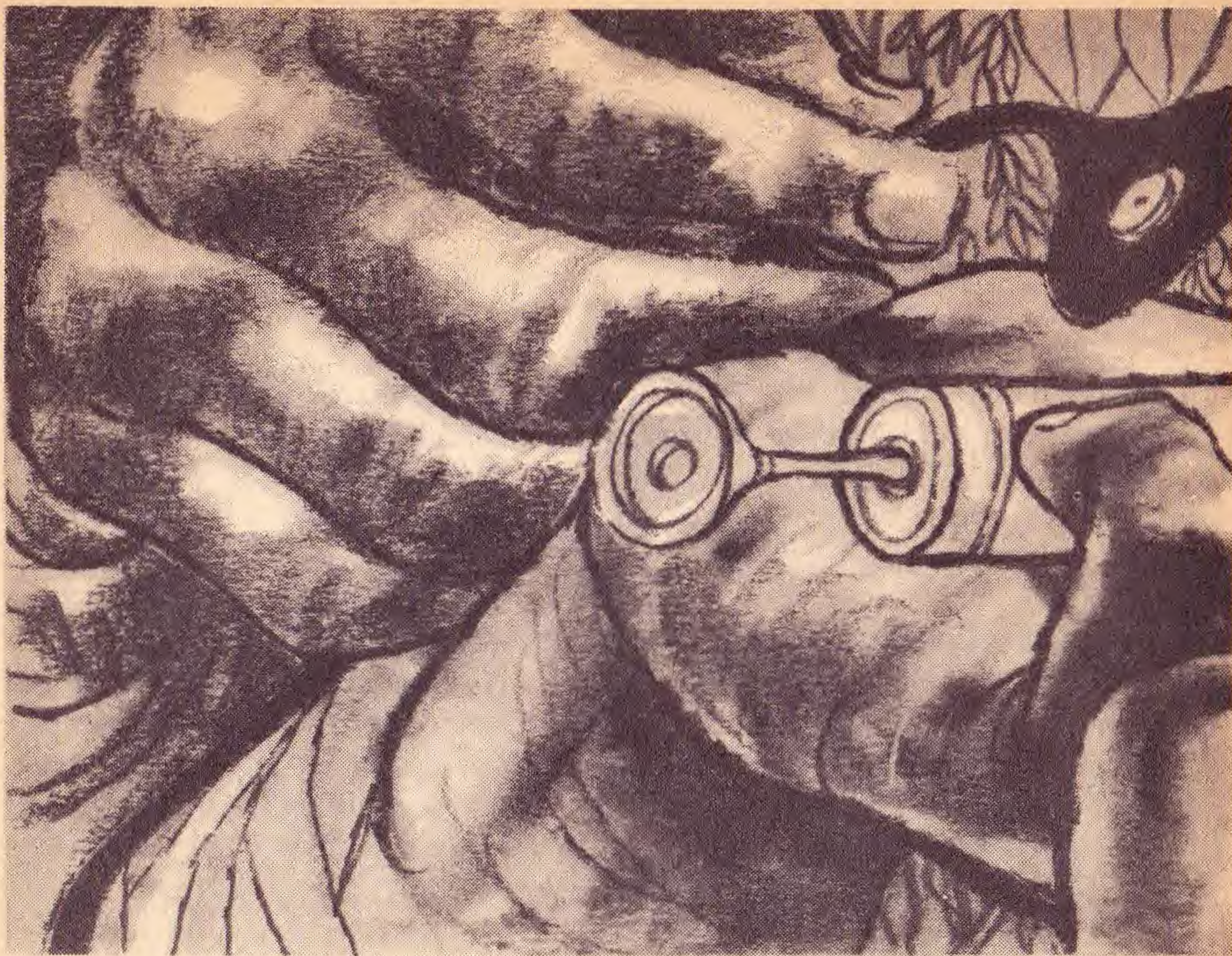
He set the machine carefully and plugged it into the time clock.

He was now free to go anywhere in time — back to primordial origins, if he wished. The time clock would not register.

He reset the controls, feeling suddenly very lonely. It was a frightening thing to plunge over the thousand-year brink. For a single instant, Barthold considered giving up the entire dubious venture, returning to the security of his own time, his own wife, his own job.

But, steeling himself, he jabbed the send-off button.





**H**E emerged in England, 662, near the ancient stronghold of Maiden Castle. Hiding the Flipper in a thicket, he emerged wearing a simple clothing of coarse linen. He took the road toward Maiden Castle, which he could see in the far distance, upon a rise of land.

A group of soldiers passed him, drawing a cart. Within the cart, Barthold glimpsed the yellow glow of Baltic amber, red-glazed pottery from Gaul, and even Italian-looking candelabra. Loot,

no doubt, Barthold thought, from the sack of some town. He wanted to question the soldiers, but they glared at him fiercely and he was glad to slink by unquestioned.

Next he passed two men, stripped to the waist, chanting in Latin. The man behind was lashing the man in front with a cruel, many-stranded leather whip. And presently they changed positions, with barely the loss of a stroke.

"I beg your pardon, sirs —"

But they wouldn't even look at him.





Barthold continued walking, mopping perspiration from his forehead. After a while, he overtook a cloaked man with a harp slung over one shoulder and a sword over the other.

"Sir," said Barthold, "might you know where I'd find a kinsman of mine, who has journeyed here from Iona? His name is Connor Lough mac Bairthre."

"I do," the man stated.

"Where?" asked Barthold.

"Standing before you," said the man. Immediately he stepped

back, clearing his sword from its scabbard and slinging his harp to the grass.

Fascinated, Barthold stared at Bairthre. He saw, beneath the long page-boy hair, an exact and unmistakable likeness of himself.

At last he had found his man!

But his man was acting most uncooperative. Advancing slowly, sword held ready for cut or slash, Bairthre commanded, "Vanish, demon, or I'll carve you like a capon."

"I'm no demon!" Barthold



cried. "I'm a kinsman of yours!"

"You lie," Bairthre declared firmly. "I'm a wandering man, true, and a long time away from home. But still I remember every member of my family. You're not one of them. So you must be a demon, taking my face for the purposes of enchantment."

"Wait!" Barthold begged as Bairthre's forearm tensed for the stroke. "Have you ever given a thought to the future?"

"The future?"

"Yes, the future! Centuries from now!"

"I've heard of that strange time, though I'm one who lives for today," Bairthre said, slowly lowering his sword. "We had a stranger in Iona once, called himself a Cornishman when he was sober and a Life Photographer when he was drunk. Walked around clicking a toy box at things and muttering to himself. Fill him up with mead and he'd tell you all about times to come."

"That's where I'm from," Barthold said. "I'm a distant kinsman of yours from the future. And I'm here to offer you an enormous fortune!"

Bairthre promptly sheathed his sword. "That's very kind of you, kinsman," he said civilly.

"But, of course, it will call for considerable cooperation on your part."

"I feared as much," Bairthre

sighed. "Well, let's hear about it, kinsman."

"Come with me," Barthold said, and led the way to his Flipper.

ALL the materials were ready in the brown suitcase. He knocked Bairthre out with a palm hypo, since the Irishman was showing signs of nervousness. Then, attaching frontal electrodes to Bairthre's forehead, he hypnoed into him a quick outline of world history, a concise course in English and in American manners and customs.

This took the better part of two days. Meanwhile, Barthold used the swiftgraft machine he had bought to transfer skin from his fingers to Bairthre's. Now they had the same fingerprints. With normal cell-shedding, the prints would flake off in some months, revealing the original ones, but that wasn't important. They did not have to be permanent.

Then, using a checklist, Barthold added some identifying marks that Bairthre was lacking and removed some they didn't share. An electrolysis job took care of the fact that Barthold was balding and his kinsman hadn't been.

When he was finished, Barthold pumped revitalizer into Bairthre's veins and waited.

In a short while, Bairthre



groaned, rubbed his hypno-stuffed head and said in modern English, "Oh, man! What did you hit me with?"

"Don't worry about it," Barthold said. "Let's get down to business."

Briefly he explained his plan for getting rich at the expense of the Inter-Temporal Insurance Corporation.

"And they'll actually pay?" Bairthre asked.

"They will, if they can't disprove the claim."

"And they will pay *that* much?"

"Yes. I checked beforehand. The compensation for double indemnity is fantastically high."

"That's the part I still don't understand," Bairthre said. "What is this double indemnity?"

"It occurs," Barthold told him, "when a man, traveling into the past, has the misfortune to pass through a mirror-flaw in the temporal structure. It's a very rare occurrence. But when it happens, it's catastrophic. One man has gone into the past, you see. But two perfectly identical men return."

"Oho!" said Bairthre. "So *that's* double indemnity!"

"That's it. Two men, indistinguishable from each other, return from the past. Each feels that his is the true and original identity and that he is the only possible

claimant of his property, business, wife and so forth. No coexistence is possible between them. One of them must forfeit all rights, leave his present, his home, wife, business, and go into the past to live. The other remains in his own time, but lives with constant fear, apprehension, guilt."

**B**ARTHOLD paused for breath. "So you see," he continued, "under the circumstances, double indemnity represents a calamity of the first order. Therefore, both parties are compensated accordingly."

"Hmm," said Bairthre, thinking hard. "Has this happened often, this double indemnity?"

"Less than a dozen times in the history of time travel. There are precautions against it, such as staying out of Paradox Points and respecting the thousand-year barrier."

"You traveled more than a thousand years," Bairthre pointed out.

"I accepted the risk and won."

"But, look, if there's so much money in this double indemnity thing, why haven't others tried it?"

Barthold smiled wryly. "It's not as easy as it sounds. I'll tell you about it sometime. But now to business. Are you in this with me?"

"I could be a baron with that



money," Bairthre said dreamily. "A king, perhaps, in Ireland! I'm in this with you."

"Fine. Sign this."

"What is it?" Bairthre asked, frowning at the legal-looking document that Barthold had thrust before him.

"It simply states that, upon receiving adequate compensation as set by the Inter-Temporal Insurance Corporation, you will go at once to a past of your own choosing and there remain, waiving any and all rights to the Present. Sign it as Everett Barthold. I'll fill in the date later."

"But the signature —" Bairthre began to object, then halted and grinned. "Through hypno-learning, I know about hypno-learning and what it can do, including the fact that you didn't have to give me the answers to my questions. As soon as I asked them, I knew the explanations. The mirror-flaw, too, by the way — that's why you hypnoed me into being left-handed and left-eyed. And, of course, the grafted fingerprints go the opposite way, the same as if you saw them in a mirror."

"Correct," said Barthold. "Any other questions?"

"None I can think of at the moment. I don't even have to compare our signatures. I know they'll be identical, except —" Again he paused and looked angry. "That's a lousy trick! I'll



be writing backward!"

Barthold smiled. "Naturally. How else would you be a mirror-image of me? And just in case you decide you like my time better than yours and try to have me sent back, remember the precautions I took beforehand. They're good enough to send you to the Prison Planetoid for life."





He handed the document to Bairthre.

"You don't take any chances, do you?" Bairthre said, signing.

"I try to cover all eventualities. It's my home and my present that we're going to and I plan to keep possession. Come on. You need a haircut and a general going-over."

Side by side, the identical-looking men walked to the Flipper.

**M**AVIS Barthold didn't have to worry about overacting. When two Everett Bartholds walked in the front door, wearing identical garments, with the same expression of nervous embarrassment, and when two Everett Bartholds said, "Er, Mavis, this will take a little explaining . . ."

It was just too much. Foreknowledge acted as no armor. She shrieked, threw her arms in the air and fainted.

Later, when her two husbands had revived her, she regained some composure. "You did it, Everett!" she said. "Everett?"

"That's me," said Barthold. "Meet my kinsman, Connor Lough mac Bairthre."

"At your service, madame," Bairthre said.

"It's unbelievable!" cried Mrs. Barthold.

"Then we look alike?" her husband asked.

"Exactly alike. Just exactly!"

"From now on," said Barthold, "think of us both as Everett Barthold. The insurance investigators will be watching you. Remember — either of us, or both, could be your husband. Treat us exactly alike."

"As you wish, my dear," Mavis said demurely.



"Except, of course, for the matter of — I mean except in the area of — of — Damn it all, Mavis, can't you really tell which one of us is me?"

"Of course I can, dear," Mavis said. "A wife always knows her husband." And she gave Bairthre a quick look, which he returned with interest.

"I'm glad to hear it," said Barthold. "Now I must contact the insurance company." He hurried into the other room.

"So you're a relative of my husband," Mavis said to Bairthre. "How alike you look!"

"But I'm really quite different," Bairthre assured her.

"Are you? You look so like him! I wonder if you really can be different."

"I'll prove it to you."

"How?"

"By singing you a song of ancient Ireland," Bairthre said, and proceeded at once in a fine, high tenor voice.

It wasn't quite what Mavis had in mind. But she realized that anyone so like her husband would have to be obtuse about some things.

And from the other room, she could hear Barthold saying, "Hello, Inter-Temporal Insurance Corporation? Mr. Gryns, please. Mr. Gryns? This is Everett Barthold. Something rather unfortunate seems to have happened . . ."

THERE was consternation at the offices of the Inter-Temporal Insurance Corporation, and confusion, and dismay, and a swift telephoning of underwriters, when two Everett Bartholds walked in, with identical nervous little smiles.

"First case of its kind in fifteen years," said Mr. Gryns. "Oh, Lord! You will submit, of course, to a full examination?"

"Of course," said Barthold.

"Of course," said Barthold.

The doctors poked and probed them. They found differences, which they carefully listed with long Latin terms. But all the differences were within the normal variation range for temporal identicals and no amount of juggling on paper could change that. So the company psychiatrists took over.

Both men responded to all questions with careful slowness. Bairthre kept his wits about him and his nerve intact. Using his hypnoed knowledge of Barthold, he answered the questions slowly but well, exactly as did Barthold.

Inter-Temporal engineers checked the time clock in the Flipper. They dismantled it and put it back together again. They examined the controls, set for Present, 1912, 1869, 1676, and 1595. 662 had also been punched — illegally — but the time clock



showed that it had not been activated. Barthold explained that he had hit the control accidentally and thought it best to leave it alone.

It was suspicious, but not actionable.

A lot of power had been used, the engineers pointed out. But the time clock showed stops only to 1595. They brought the time clock back to the lab for further investigation.

The engineers then went over the interior of the Flipper inch by inch, but could find nothing incriminating. Barthold had taken the precaution of throwing the brown suitcase and its contents into the English Channel before leaving the year 662.

Mr. Gryns offered a settlement, which the two Bartholds turned down. He offered two more, which were refused. And, finally, he admitted defeat.

The last conference was held in Gryns' office. The two Bartholds sat on either side of Gryns' desk, looking slightly bored with the entire business. Gryns looked like a man whose neat and predictable world has been irrevocably upset.

"I just can't understand it," he said. "In the years you traveled in, sirs, the odds against a time flaw are something like a million to one!"

"I guess we're that one," said

Barthold, and Bairthre nodded.

"But somehow it just doesn't seem — well, what's done is done. Have you gentlemen decided the question of your coexistence?"

**B**ARTHOLD handed Gryns the paper that Bairthre had signed in 662. "*He* is going to leave, immediately upon receipt of his compensation."

"Is this satisfactory to you, sir?" Gryns asked Bairthre.

"Sure," said Bairthre. "I don't like it here anyhow."

"Sir?"

"I mean," Bairthre said hastily, "what I mean is, I've always wanted to get away, you know, secret desire, live in some quiet spot, nature, simple people, all that . . ."

"I see," Mr. Gryns said dubiously. "And do you feel that way, sir?" he asked, turning to Barthold.

"Certainly," Barthold asserted. "I have the same secret desires he has. But one of us has to stay — sense of duty, you know — and I've agreed to remain."

"I see," Gryns said. But his tone made it clear that he didn't see at all. "Hah. Well. Your checks are being processed now, gentlemen. A purely mechanical procedure. They can be picked up tomorrow morning — always assuming that no proofs of fraud are presented to us before then."



The atmosphere was suddenly icy. The two Bartholds said good-bye to Mr. Gryns and left very quickly.

They rode the elevator down in silence. Outside the building, Bairthre said, "Sorry about that slip about not liking it here."

"Shut up!"

"Huh?"

Barthold seized Bairthre by the arm and dragged him into an automatic heli, taking care not to choose the first empty one he saw.

He punched for Westchester, then looked back to see if they were being followed. When he was certain they were not, he checked the interior of the heli for camera or recording devices. At last he turned to speak to Bairthre.

"You utter damned fool! That boner could have cost us a fortune!"

"I've been doing the best I can," Bairthre said sullenly. "What's wrong now? Oh, you mean they *suspect*."

"That's what's wrong! Gryns is undoubtedly having us followed. If they can find anything — anything at all to upset our claim — it could mean the Prison Planetoid."

"We'll have to watch our steps," said Bairthre soberly.

"I'm glad you realize it," Barthold said.

THEY dined quietly in a Westchester restaurant and had several drinks. This put them in a better frame of mind. They were feeling almost happy when they returned to Barthold's house and sent the heli back to the city.

"We will sit and play cards tonight," said Barthold, "and talk, and drink coffee, and behave as though we both were Barthold. In the morning, I'll go collect our checks."

"Good enough," Bairthre agreed. "I'll be glad to get back. I don't see how you can stand it with iron and stone all around you. Ireland, man! A king in Ireland, that's what I'll be!"

"Don't talk about it now." Barthold opened the door and they entered.

"Good evening, dear," Mavis said, looking at a point exactly midway between them.

"I thought you said you knew me," Barthold commented sourly.

"Of course I do, darling," Mavis said, turning to him with a bright smile. "I just didn't want to insult poor Mr. Bairthre."

"Thank you, kind lady," said Bairthre. "Perhaps I'll sing you another song of ancient Ireland later."

"That would be lovely, I'm sure," Mavis said. "A man telephoned you, dear. He'll call later. Honey, I've been looking at ads for scart fur. The Polar Martian



Scart is a bit more expensive than plain Canal Martian Scart, but—"

"A man called?" Barthold asked. "Who?"

"He didn't say. Anyhow, it wears much better and the fur has that iridescent sheen that only —"

"Mavis! What did he want?"

"It was something about the double indemnity claim," she said. "But that's all settled, isn't it?"

"It is not settled until I have the check in my hand," Barthold told her. "Now tell me exactly what he said."

"Well, he told me he was calling about your so-called claim on the Inter-Temporal Insurance Corporation —"

"'So-called?' Did he say 'so-called'?"

"Those were his exact words. So-called claim on the Inter-Temporal Insurance Corporation. He said he had to speak to you immediately, before morning."

Barthold's face had turned gray. "Did he say he'd phone back?"

"He said he'd call in person."

"What is it?" Bairthre asked. "What does it mean? Of course — an insurance investigator!"

"That's right," Barthold said. "He must have found something."

"But what?"

"How should I know? Let me think!"

AT that moment, the doorbell rang. The three Bartholds looked at each other dumbly.

The doorbell rang again. "Open up, Barthold!" a voice called. "Don't try to duck me!"

"Can we kill him?" Bairthre asked.

"Too complicated," said Barthold, after a little thought. "Come on! Out the back way!"

"But why?"

"The Flipper's parked there. We're going into the past! Don't you see? If he had proof, he'd have given it to the insurance people already. So he only suspects. He probably thinks he can trip us up with questions. If we can keep away from him until morning, we're safe!"

"What about me?" Mavis quavered.

"Stall him," Barthold said, dragging Bairthre out the back door and into the Flipper. The doorbell was jangling insistently as Barthold slammed the Flipper's door and turned to the controls.

Then he realized that the Inter-Temporal engineers had not returned his time clock.

He was lost, lost. Without the time clock, he couldn't take the Flipper anywhere. For an instant, he was in a complete state of panic. Then he regained control of himself and tried to think the problem through.



His controls were still set for Present, 1912, 1869, 1676, 1595 and 662. Therefore, even without the time clock, he could activate any of those dates manually. Flying without a time clock was a federal offense, but to hell with that.

Quickly he stabbed 1912 and worked the controls. Outside, he heard his wife shrieking. Heavy footsteps were pounding through his house.

"Stop! Stop, you!" the man was shouting.

And then Barthold was surrounded by a filmy, never-ending grayness as the Flipper speeded down the years.

**B**ARTHOLD parked the Flipper on the Bowery. He and Bairthre went into a saloon, ordered a nickel beer apiece and worked on the free lunch.

"Damned nosy investigator," Barthold muttered. "Well, we've shaken him now. I'll have to pay a stiff fine for joyriding a Flipper with no time clock. But I'll be able to afford it."

"It's all moving too fast for me," said Bairthre, downing a great gulp of beer. Then he shook his head and shrugged. "I was just going to ask you how going into the past would help us collect our checks in the morning in your present. But I realize I know the answer."

"Of course. It's the elapsed time that counts. If we can stay hidden in the past for twelve hours or so, we'll arrive in my time twelve hours later than we left. Prevents all sorts of accidents, such as arriving just as you depart, or even before. Routine traffic precautions."

Bairthre munched a salami sandwich. "The hypno-learning is a little sketchy about the time trip. Where are we?"

"New York, 1912. A very interesting era."

"I just want to go home. What are those big men in blue?"

"They're policemen," Barthold said. "They seem to be looking for someone."

Two mustached policemen had entered the saloon, followed by an enormously fat man in ink-stained clothes.

"There they are!" shouted Bully Jack Barthold. "Arrest them twins, officers!"

"What is all this?" inquired Everett Barthold.

"That your jalopy outside?" one of the policemen asked.

"Yes, sir, but —"

"That clinches it, then. Man's got a warrant out for you two. Said you'd have a shiny new jalopy. Offering a nice reward, too."

"The guy came straight to me," said Bully Jack. "I told him I'd be real *happy* to help—though I'd



rather take a poke at him, the lousy, insinuating, dirty —"

"Officers," Barthold pleaded, "we haven't done anything!"

"Then you got nothing to fear. Come along quiet now."

Barthold plunged suddenly past the policemen, shoved Bully Jack in the face and was in the street. Bairthre, who had been considering the same thing, stomped hard on one policeman's foot, jabbed another in the stomach, rammed Bully Jack out of his way and followed on Barthold's heels.

They leaped into the Flipper and Barthold jabbed for 1869.

**T**HEY concealed the Flipper as well as they could, in a backstreet livery stable, and walked to a little park nearby. They opened their shirts to the warm Memphis sunlight and lay back on the grass.

"That investigator must have a supercharged time job," Barthold said. "That's why he's reaching our stops before us."

"How does he know where we're going?" Bairthre asked.

"Our stops are a matter of company record. He knows we haven't got a time clock, so these are the only places we can reach."

"Then we aren't safe here," said Bairthre. "He's probably looking for us."

"Probably he is," Barthold said wearily. "But he hasn't caught us yet. Just a few more hours and we're safe! It'll be morning in the Present and the check will have gone through."

"Is that a fact, gentlemen?" a suave voice inquired.

Barthold looked up and saw Ben Bartholder standing before him, a small derringer balanced in his good left hand.

"So he offered you the reward, too!" Barthold said.

"He did indeed. And a most tempting offer, let me say. But I'm not interested in it."

"You're not?" Bairthre said.

"No. I'm interested in only one thing. I want to know *which of you walked out on me last night in the saloon.*"

Barthold and Bairthre stared at each other, then back at Ben Bartholder.

"I want that one," Bartholder said. "Nobody insults Ben Bartholder. Even with one hand, I'm as good a man as any! I want that man. The other can go."

Barthold and Bairthre stood up. Bartholder stepped back in order to cover them both.

"Which is it, gents? I don't possess a whole lot of patience."

He stood before them, weaving slightly, looking as mean and efficient as a rattlesnake. Barthold decided that the derringer was too far away for a rush. It



probably had a hair-trigger, anyhow.

"Speak up!" Bartholder said sharply. "Which of you is it?"

**T**HINKING desperately, Barthold wondered why Ben Bartholder hadn't fired yet, why he hadn't simply killed them both.

Then he figured it out and immediately knew his only course of action.

"Everett," he said.

"Yes, Everett?" said Bairthre.

"We're going to turn around together now and walk back to the Flipper."

"But the gun —"

"He won't shoot. Are you with me?"

"With you," Bairthre said through clenched teeth.

They turned, like soldiers in a march, and began to pace slowly back toward the livery stable.

"Stop!" Ben Bartholder cried. "Stop or I'll shoot you both!"

"No, you won't!" Barthold shouted back. They were in the street now, approaching the livery stable.

"No? You think I don't dare?"

"It isn't that," Barthold said, walking toward the Flipper. "You're just not the type to shoot down a perfectly innocent man. And one of us is innocent!"

Slowly, carefully, Bairthre opened the Flipper's door.

"I don't care!" Bartholder

yelled. "Which one? Speak up, you miserable coward! Which one? I'll give you a fair fight. Speak up or I'll shoot you both here and now!"

"And what would the boys say?" Barthold scoffed. "They'd say that the one-handed man lost his nerve and killed two unarmed strangers!"

Ben Bartholder's iron gun hand sagged.

"Quick, get in," Barthold whispered.

They scrambled in and slammed the door. Bartholder put the derringer away.

"All right, mister," Ben Bartholder said. "You been here twice and I think you'll be here a third time. I'll wait around. The next time I'll get you."

He turned and walked away.

**T**HEY had to get out of Memphis. But where could they go? Barthold wouldn't consider Konigsberg, 1676, and the Black Death. London, 1595, was filled with Tom Barthol's criminal friends, any of whom would cheerfully cut Barthold's throat for treachery.

"We'll go all the way back," Bairthre said. "To Maiden's Castle."

"And if he comes there?"

"He won't. It's against the law to go past the thousand-year limit. And would an insurance



man break the law?"

"He might not," Barthold said thoughtfully. "He just might not. It's worth a try."

And again he activated the Flipper.

They slept in an open field that night, a mile from the Fortress of Maiden's Castle. They stayed beside the Flipper and took turns at sentry duty. And finally the sun rose, warm and yellow, above the green fields.

"He didn't come," Bairthre said.

"What?" Barthold asked, waking with a start.

"Snap out of it, man! We're safe. Is it morning yet in your Present?"

"It's morning," Barthold said, rubbing his eyes.

"Then we've won and I'll be a king in Ireland!"

"Yes, we've won," Barthold said. "Victory at last is — damn!"

"What's the matter?"

"That investigator! Look over there!"

Bairthre stared across the fields, muttering, "I don't see a thing. Are you sure —"

Barthold struck him across the back of the skull with a stone. He had picked it up during the night and saved it for this purpose.

He bent over and felt Bairthre's pulse. The Irishman still lived, but would be uncon-

scious for a few hours. When he recovered, he would be alone and kingdomless.

Too bad, Barthold thought. But under the circumstances, it would be risky to bring Bairthre back with him. How much easier it would be to walk up to Inter-Temporal himself and collect a check for Everett Barthold. Then return in half an hour and collect another check for Everett Barthold.

And how much more profitable it would be!

He climbed into the Flipper and looked once more at his unconscious kinsman. What a shame, he thought, that he will never be a king in Ireland.

But then, he thought, history would probably find it confusing if he had succeeded.

He activated the controls, headed straight for the Present.

**H**E reappeared in the back yard of his house. Quickly he bounded up the steps and pounded on the door.

"Who's there?" Mavis called.

"Me!" Barthold shouted. "It's all right, Mavis — everything has worked out fine!"

"Who?" Mavis opened the door, stared at him, and let out a shriek.

"Calm down," Barthold said. "I know it's been a strain, but it's all over now. I'm going for



the check and then we'll —"

He stopped. A man had just appeared in the doorway beside Mavis. He was a short man, beginning to bald, his features ordinary, and his eyes were mild behind horn-rimmed glasses.

It was himself.

"Oh, no!" Barthold groaned.

"Oh, yes," his double said. "One cannot venture beyond the thousand-year barrier with impunity, Everett. Sometimes there is a sound reason for a law. I am your time-identical."

Barthold stared at the Barthold in the doorway. He said, "I was chased —"

"By me," his double told him. "In disguise, of course, since you have a few enemies in time. You imbecile, why did you run?"

"I thought you were an investigator. Why were you chasing me?"

"For one reason and one reason only."

"What was that?"

"We could have been rich beyond our wildest dreams," his double said, "if only you hadn't been so guilty and frightened! The three of us — you, Bairthre and me — could have gone to Inter-Temporal and claimed *triple indemnity!*"

"Triple indemnity!" Barthold breathed. "I never thought of it."

"The sum would have been staggering. It would have been

infinitely more than for double indemnity. You disgust me."

"Well," Barthold said, "what's done is done. At least we can collect for double indemnity, then decide —"

"I collected both checks and signed the release forms for you. You weren't here, you know."

"In that case, I'd like my share."

"Don't be ridiculous," his double told him.

"But it's mine! I'll go to Inter-Temporal and tell them —"

"They won't listen. I've waived all your rights. You can't even stay in the Present, Everett."

"Don't do this to me!" Barthold begged.

"Why not? Look at what you did to Bairthre."

"Damn it, you can't judge me!" Barthold cried. "*You're me!*"

"Who else is there to judge you except yourself?" his double asked him.

**B**ARTHOLD couldn't cope with that. He turned to Mavis.

"Darling," he said, "you always told me you'd know your own husband. Don't you know me now?"

Mavis moved back into the house. As she went, Barthold noticed the flash of rumstones around her neck and asked no more.



Barthold and Barthold stood face to face. The double raised his arm. A police heli, hovering low, dropped to the ground. Three policemen piled out.

"This is what I was afraid of, officers," the double said. "My double collected his check this morning, as you know. He waived his rights and went into the past. I was afraid he'd return and try for more."

"He won't bother you again, sir," a policeman said. He turned to Barthold. "You! Climb back in that Flipper and get out of the Present. The next time we see you, we shoot!"

Barthold knew when he was beaten. Very humbly, he said, "I'll gladly go, officers. But my Flipper needs repairs. It doesn't have a time clock."

"You should have thought about that before signing the waiver," the policeman said. "Get moving!"

"Please!" Barthold said.

"No," Barthold answered.

No mercy. And Barthold knew that, in his double's place, he would have said exactly the same thing.

He climbed into the Flipper and closed the door. Numbly he contemplated his choices, if they could be called that.

New York, 1912, with its maddening reminders of his own time and with Bully Jack Barthold? Or Memphis, 1869, with Ben Bartholder awaiting his third visit? Or Konigsberg, 1676, with the grinning, vacant face of Hans Baerthaler for company, and the Black Death? Or London, 1595, with Tom Barthal's cutthroat friends searching the streets for him? Or Maiden's Castle, 662, with an angry Connor Lough mac Bairthre waiting to even the score?

It really didn't matter. This time, he thought, let the place pick me.

He closed his eyes and blindly stabbed a button.

— ROBERT SHECKLEY

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# ROBOTS ARE NICE ?

By GORDON R. DICKSON

*To Jim Harvey, robots were not a bit nice—they had something up their sleeve valves—and it was a matter of make or brake!*

Illustrated by DICK FRANCIS

**T**HE home robofax in the wall of Jim Harvey's apartment living room clicked once and slid a letter out onto the table. It was a letter with Jim Harvey's name and return address on it and addressed

to *The Dunesville Robocourier*, Editorial Page Section. A polite note was clipped to it. The note read:

Because of insufficient space in our Readers Column, we are regret-



fully returning your letter to the editor.

"Ha!" said Jim Harvey. He was a young man with blond hair, a crooked nose and a wild light in his eye. He sat on his living room couch with a martini glass in his hand.

"Tut-tut!" said the roboannunciator on the wall, in gently reproving tones.

"Censorship!" snarled Jim.

"No, no," said the robovision set in the corner of the room, in a hurt voice. "You don't mean that, Jim."

"I do, too!" Jim drained his glass. "Give me another martini."

The home robobartender glided across the carpet to oblige.

"But robots are nice," said the robovision, quoting the robo-teachers' manual on the instruction of young humans from nursery school through college.

"Don't give me that." Jim watched the robobartender pour his glass full. "I know what you're up to. You don't fool me. I know I'm the only sane man left in the world. I squeezed that information out of the robopollsters last week, remember? You've forced everybody else—"

"We have not!" cried the robo-recordplayer abruptly from its niche beside the couch. "Robots never force anybody. It's expressly forbidden."

"It is a prime command," asserted the robothermostat, rather primly. "Are you warm enough?" it added, concerned.

"No," said Jim nastily. "It's at least two-tenths of a degree too cold in here."

"I'll fix it in a second," promised the robothermostat.

JIM gulped moodily at his martini, wondering what else he could do to keep the robots busy.

"All we do," said the robovision, "is *persuade* people—"

"Brain-washing!" growled Jim.

"—that robots are nice," put in the roboannunciator. "There's someone coming up your front walk. It's your fiancée, Nancy Pluffer. Now she's going away again. I turned on the *Not At Home* sign," it concluded smugly.

"Turn it off again!" yelled Jim.

"Too late," said the roboannunciator. "She's left."

Jim cursed bitterly and picked up his fresh martini.

"If you'd just stop drinking for a little while," said the robovision, "we could make you much happier and better adjusted."

"Why do you think I do it?" challenged Jim. "You can't give me psychiatric treatment when I'm under the influence of alcohol or drugs. Prime command. Right?"

"Right," said the robovision sadly.



"Well," Jim said, poking at the olive in his martini with a swizzle stick, "what now? You barred me from using the newspaper facsimile letter columns to fight back at you and warn the world."

"No such thing. It just happened that four thousand nine hundred and seventeen letters came in the morning mail just before yours did. Naturally, that's more than can be published in the six-month limit and we had to return yours." It sighed. "If you'd only relax for a minute. Would you like to watch a girlie show? The Squidgy Hour is on the air right now."

"No!"

"You're not very cooperative."

"You're darn right I'm not very cooperative." Jim got up, ran a hand through his somewhat tousled hair and headed for the front door. "I'm going out where I can get some privacy. Maybe I'll even find a publisher for my M.A. thesis on robosociology. Where's my cape?"

"In the closet," said the robo-butler. "Oh, Jim, if you'd only never written that thesis!"

"You'd have liked that, wouldn't you? Ha!" Jim said, fumbling in the closet. "If I hadn't looked into the situation, I'd never have suspected what you were up to, trying to dominate the human — *Let go of me!*" barked Jim, slapping the robo-

butler away. "I can put on my own cape! — And don't think you've heard the last of that, either," he said, turning to the front door. "You incinerated my only copy, but I've still got it locked up here in my head—This door won't open."

"**B**UT we only want you to be happy!" pleaded the robobutler.

"This door's stuck," Jim said, yanking at the knob.

"No, it's locked," said the roboannunciator.

"Open it."

"I won't!" the roboannunciator replied sulkily.

"I *order* you to open it! You have to open on command. That's a prime command!"

"Yes, but what command?" asked the roboannunciator. "The roborepairservice was out while you were gone yesterday and rewired me. It takes a new sort of command to open me now and I'm rewired so that I can't tell you what it is. Guess."

"Now you've gone too far—locking me in my own home! I'll teach you! I'll show you all!" He headed for the kitchen. "I'll disconnect you!"

"Jim, don't!" begged the robo-butler, rolling after him. "Jim, stop and think—"

"Ha!" said Jim, throwing open the door of a cabinet set flush



with the kitchen's glastile wall. "I'll yank the master switch and —*who in hell stole my master switch?*"

"There's a red tag on the door handle," the robobutler pointed out.

Jim jerked it loose and held it up to look at it. Neatly printed on the red surface were the words:

UNIT REMOVED FOR  
INVESTIGATION OF  
POSSIBLE MALFUNCTION.  
ROBOREPAIRSERVICE

"No!" roared Jim. He ran back through the house to the living room.

In front of the ornamental fireplace was a heavy brass-handled ornamental poker. Snatching it up, he turned and brought it down with a crash on the robobutler which had hastily followed at his heels.

"Awk!" went the robobutler and collapsed into junk.

"Stop it, Jim!" cried the robobartender, whizzing forward. "You don't know what you're do—"

*Crash!*

"Help!" yelled the robovision. "Calling roborepairservice! Calling roborepairservice! Malicious robocide taking place at 40 Wilderleaf Drive. Calling—"

*Smash!*

JIM raged through his house, wrecking and destroying. The roboannunciator required several swings, since most of its circuits were protected by inner walls. The roborefrigerator resisted for a good eighteen seconds through sheer bulk and the robosweeper hid behind the couch, but was quickly hunted down. The robohomeconditioner was too massive to be destroyed properly, but the robothermostat perished in a single shower of glass and small parts. Finally, in a home at last fallen silent, Jim finished up by knocking out a picture window and crawling through it to the lawn.

"Stop!" called a new voice. "Halt in the name of the roborepairservice!"

Jim turned about. A robomechanic was trundling up to him, its waldoes outstretched to grab him. Jim picked up the poker, dodged its initial rush—every robomechanic was notoriously slow on its treads—and with a well-placed swing disabled its rear bogies. Hamstrung, it lurched to a halt and he bashed in its robobrain with a single two-handed blow. It fell silent—but robodoors were swinging open at neighboring houses and robovoices raised in alarm.

Jim turned and ran.

Several blocks away, panting, he came to a halt. He had, he



saw, outrun the hue and cry. He was over on Wilder Way, at a bus stop.

"May I be of service?"

A robobus had just rolled up to the curb. It was one of the smallest—a three-seater—but even at that, Jim almost took to his heels again before he realized that the vehicle was making no hostile move, but merely standing and waiting, in the time-honored manner of all robobuses.

"Why, yes," he said craftily. He hesitated and then got in. "Duschane and Pierce."

"Yes, sir." The minibus closed its doors and rolled on in blissful ignorance, clicking the milage off on its meter. Jim chortled internally. He had had no plan until the bus had come up to him—after all, he was pretty isolated out in the suburbs and it would not have been hard for the robots to run him down.

But now . . .

He took the bus across town and got off at the junction of Duschane and Pierce Streets. Then he doubled back toward downtown through rear alleys for eight blocks until he came to a small house on a quiet residential street.

*Miss Nancy Pluffer — Not At Home* read the illuminated sign above the front door. Jim chortled again and went around to the back.

THE house appeared to be slumbering. The windows were opaqued and no sound or movement could be heard from without. Jim circled the place, being very careful to alert no robosensitive device. Then he considered. He knew which were the windows of Nancy's bedroom and went around to them. These were also opaqued, but open a crack, since Nancy liked air. He pushed one up and crawled through. He stood up in the darkened bedroom.

There was someone in the bed. Jim blinked — and then, as his expanding pupils adjusted to the dim light, saw that it was Nancy, evidently taking an afternoon nap. He went softly across the carpet to the bedside and whispered in her ear.

"Wake up!"

She stirred, yawned and looked up — and opened her mouth to scream.

"Shh!" Jim hissed frantically, putting his hand over her mouth.

Recognition crept in to drive out her alarm. Jim took his hand away and she sat up in bed with blonde hair tumbling around her shoulders and a pleased expression on her pretty face.

"Jim!" she said. "Why, this is just like the private eye in *The Robosnatchers*."

"Never mind that." The brusqueness of his own voice, echoing



in the shadowy silence of the bedroom, took him by surprise, and he realized with a start that the day's earlier martinis were wearing off under the abrasive edge of his present tension and excitement. "This is a matter of — well, life or death, as a matter of fact. I want to talk to you. But hold on a minute — got anything to drink around?"

"In the living room."

"Get me a drink — wait! Go get it yourself. Don't ring for the robobartender. Are any of your robots on?"

"Why, no," Nancy said. "I pulled the master switch so I could nap without anybody disturbing me." She gave a little squeal. "Isn't this exciting?"

"No," said Jim. "Now listen to me. Don't turn anything on. You've got that? Nothing. Leave everything off. Just go to the living room, get me a double shot of something and bring it back here by yourself. Got it?"

"Got it." She rose from the bed and floated off toward the living room. "*Just* like the private eye," she murmured blissfully.

**J**IM sat sweating until she came back with an old-fashioned glass half-full of something that he discovered — after he had tossed it off — to be creme de menthe.

"Gah!" he said.

"Do you want some more, honey?" asked Nancy anxiously. "I brought the bottle back."

"No!"

"Then I'll just have a little drop myself —"

"No, you don't!" Jim snatched the bottle out of her hands, paying no attention to her hurt expression. "One of us has to stay sober." He reached over to the nightstand, pushed Nancy's portable robophonovision aside to leave room and set the bottle down out of reach. "You ready to listen to me?"

"Yes," said Nancy obediently.

"All right. You know my thesis?"

"Of course! Honestly, Jim, just because I'm a dancer, you never give me credit for having any brains. Certainly I know your thesis. I read every word of it."

"Did it mean anything to you?"

"Of course — well," faltered Nancy, seeing his eye hard upon her, "you know what I mean. I could *read* it all right."

"It didn't mean anything to you that the robots have practically taken over our whole society — that they've been making us more and more dependent on them all the time?"

"Well, sure, I understood that. But it did sound kind of silly, you know, Jim. I mean, honey, the robots *love* us. They *have* to. It's a prime command."







"And you think, because they love you, they won't try to run your life? Ha!" said Jim. "Well, never mind that. The point is, they're out to get me."

"Don't be silly, Jim."

"*I'm not being silly!* Why'd you think I came here? Why'd you think I had to climb in your window?"

Nancy looked coy.

"It wasn't that at all!" said Jim. "The robots are after me. Do you want them to get me? How'd you like to have me certified insane? We wouldn't be able to get married then."

"But, honey, if you were insane, they'd fix you up — the robopsychologists, that is."

"That," said Jim, with strained patience, "is just what I'm afraid of. Look, are you on my side or aren't you?"

"Oh, I am! I am," replied Nancy hastily. "What am I supposed to do?"

"**W**ELL, here it is," said Jim. "We've got to wake people up to the situation. We can't fight it alone, but if other people would wake up to the danger, we'd still have time to stop the robots. They can't take mass action against humans because of their prime commands in the love-honor-and-obey categories. So the thing to do is get the word to other people."

"Oh, yes!" agreed Nancy.

"Okay. First we'll have to pack up some warm clothing and some provisions and get out of the city. Then we'll launch our campaign from some countryside where there aren't a flock of robots around to jump us."

"That sounds exciting —"

"We'll need money. I don't dare go near a bank. But they still don't suspect you. So I want you to go down to your account and draw out at least two thousand."

"But I haven't got two thousand, Jim!" said Nancy. "I've got eighty-something."

"Eighty-something?"

"Well, I made a down payment on the *loveliest* new synthefur last week and—"

"Oh, that's fine!" cried Jim. "That's just fine. The world is going down into roboslavery and she buys synthefurs."

"But I didn't *know* it was going down into slavery last week!" protested Nancy. "You didn't *tell* me!"

"Never mind. Draw out eighty. Buy a lot of staples. Get hold of a gun, if you can. Then come back here just as quickly as possible—"

"Don't you do it," warned a voice.

Jim jumped. "Who said that?"

"I don't know, dear," said Nancy, looking about her in bewilderment.



"I thought you said you pulled the master switch and all your house robots were out of action."

"I did," she said.

"That sounded like a robot."

"It isn't talking now, Jim."

"If it's a robot," said Jim grimly, "I'll make it speak up. Nancy! Go to the kitchen. Bring me back a bread knife. I'm going to cut my throat."

**T**HE voice shrieked suddenly, "Don't do that! You'll *hurt* yourself! Please. Stop for a moment. You don't want to commit suicide. Wait! Think!"

"Aha!" said Jim, locating it. "Just as I suspected. It's your portable robophonovision by the bed there."

"She did not suspect," said the robophonovision modestly, "that, being portable, I had my own built-in source of power."

"Eavesdropper!"

"Oh, no. I'm a robophonovision. See my trademark? Right here in front. It says — "

"Robospy!"

"I am most definitely not a robospy, either. Robospies are forbidden by the United League of Nations."

"You were listening!" snapped Jim.

"To be sure. And reporting your conversation over the robo-communications network. We are shocked. How *could* you!"

"How could I what?"

"Seducing this innocent!"

"Why, he did not!" objected Nancy. "He never even made a move — "

"There, there," said the robophonovision tenderly. "You are distraught." It crooned a little. "Robots are nice."

"Nicer than anybody," responded Nancy automatically. "But — "

"*Silence!*" roared Jim. "Don't say another word, Nancy. It's heard too much already. I've got to get out of here. If it's been reporting our conversation, there probably are robots on the way here to trap me again."

"But what're you going to do?"

"I don't dare tell you with that — wait a minute." Jim snatched up the robophonovision, lifted it high overhead and sent it crashing into ruins on the bedroom floor.

Nancy screamed. "My new robophonovision!"

"You can have mine," said Jim. "Listen, Nancy, I'm going to try to get to the central broadcasting station in the city. There are master command controls to let humans take over in an emergency. If I can get to them, the robots can't stop me from broadcasting a warning to everybody listening in at the time. You stay here. Now that they know about you, I'd only get you into trouble by taking you with me." He kissed



her hurriedly. "Wish me luck."

"I heard that," croaked the the battered remains of the robo-vision set on the floor.

"Damn!" said Jim. He stamped on it. It went dead. "G'by," he said hastily, and dived out the window.

"Be careful!" Nancy wailed after him, leaning out the window.

He waved back reassuringly and took off down the alley behind her house, at a run.

**I**T was later in the afternoon than he had thought. The sun was barely above the horizon and deep shadows lay between the houses. He flickered in and out of this concealment, now finding himself silhouetted against a milk-white or rose-pink plastic wall, now pausing to catch his breath in the security of heavy gloom.

The warm summer twilight air reached down deep into his lungs and Jim found his spirits bubbling up in response to the excitement and the challenge. This was the way to live — dangerously! He even felt a slight twinge of regret about what he was doing — after he had spiked the robots' attempt to take over the human race, what would there be left to provide him with this heady wine of danger? Still, duty came first.

He ran on.

After a while, he found himself

on the edge of the downtown office and store district. He risked another bus — a large one this time, on which there were a crowd of people and a good number getting on at the same time as he did. The bus did not appear to recognize him, but a few blocks down the street, it unexpectedly pulled over to the curb and announced that it had had a breakdown. The roborepairtruck would be out very soon.

Jim slipped out the back door and lost himself in the crowd. He resigned himself to going the rest of the way on foot. It was not a pleasant method. He had not walked this far since he had gone for a hike once in college on a bet. His feet had a peculiar sensation. They felt heavy and, amazingly, rather warm. There were stretched feelings in the calves of both his legs and he felt an urge to sit down. It had been quite pleasant to relax on that last bus.

An idealist, however, does not stop to count the cost. Limping a little, Jim crossed the final wide expanse of the city's Central Boulevard and approached the further walk. Directly before him reared the high white marble structure of the city's central broadcasting station.

The stately glass and gold of the robodoor of the station swung open to admit him. Inside, Jim



saw that the entire lobby was empty, except for an old lady registering a complaint with a roboclerk.

"Disgusting!" she was saying, hammering the head of her super-light atom-powered pogo-stick upon the counter. "Unmentionable! *Obscene!*"

"Yes, dear lady!" cooed the roboclerk in soft tenor tones.

"Called the Squidgy Hour or something!"

"I'm so sorry, dear lady. Your set's robocensor obviously was experiencing a malfunction — "

"You ought to be *ashamed* of yourselves!"

"Oh, we are! We are! Would you like to hit me? Ouch?" asked the roboclerk experimentally.

"**D**ON'T try to change the subject!" shrilled the old lady. "I want that program eliminated. I don't want to turn on my set and see it ever again."

"Dear lady, I can promise you that," said the roboclerk. "Your set's robocensor — "

"Don't you go putting me off with a lot of technical talk. I want results!"

"Yes, dear lady. I promise, dear lady. Robots are nice?"

"Nicer than anybody," grumbled the old lady, "if I don't ever set eyes on that Squidgy Hour again. Hmpf!" Still quivering with indignation, the old lady hopped

on her pogo-stick, flipped on the motor and bounced out the door.

"Now!" said Jim, as the robo-door closed behind her, approaching the clerk.

"How could you?" demanded the roboclerk, switching to a reproving bass. "Jim, seducing that inno — "

"I went through all that already, and for your information, what makes you think Nancy's so — oh, forget it. I want access to the manual controls and broadcast priority. Emergency! Right now!"

"Please don't, Jim."

"Right now!"

"Consider, is it worth it? What untold damage might result? What misery — "

"*Right now!*"

"Oh, all right," said the roboclerk sorrowfully. A door opened in the wall beside it. "Up the escalator and to your right through the door there. Robots are nice?"

"Robots are *not* nice!" snapped Jim.

**L**EAVING the roboclerk sobbing softly in a heartbreaking soprano voice, Jim went up the escalator. Following directions, he found himself in an airy, well-windowed comfortable room. He saw a desk with a microphone, a monitor screen set up before it and a red toggle switch, set into



the desktop, marked *Mechanical Override — On, Off*.

He sat down at the desk and reached for the toggle switch.

"Stop!" said a robovoice, and the monitor screen lit up before him. "Look first, Jim, before you act!"

He looked. The screen showed the broad expanse of the city's Central Boulevard, before the broadcast station. Some roboambulances had just rolled up. A crowd had gathered and some roboutilities were stringing rope to hold them back.

"See, Jim?" urged the robovoice. "You are surrounded. You will never escape from this building. Right now, robodiagnosticians are talking with everyone who knows you. The minute you attempt to broadcast, they will ask them to sign orders committing you to the robopsychoanalysts for reorientation. At least one out of all those people is bound to sign. If not, a general appeal will be made. Some human will sign, realizing that you constitute a public danger."

"Nonsense!" said Jim — but his voice shook a little. "I believe in the spirit of freedom that lies in every human breast. They won't listen to you. They'll listen to me."

"Jim," said the robovoice mournfully, "we have run a computation and a theoretical ques-

tion sample pool. The results —"

"Never mind the results!" Jim reached for the toggle switch.

"Think!" cried the robovoice.

"Never!" replied Jim firmly.

He flicked the switch.

ONE of the ambulant robo-brains had escaped the six months of anti-robot pogrom that had followed Jim's speech. It had been hiding in the sewers of the city for all this time. Occasionally it wondered at the survival circuit that must have been built into it, at some time or another, that had enabled it to exist after all the other robots had been smashed.

*What Is Life?* it would ask itself now and then. Or sometimes merely — *Whither?* Not being one of the large non-ambulant brains, it was not, of course, equipped to answer these questions, but there was a certain amount of comfort in asking them anyway.

It had found itself a niche under an abandoned and rusted-tight storm drain. A cozy place, but something of a cul-de-sac. The robobrain did not really care. It knew its days were numbered.

When nothing else occurred to it, it sang "I Love Humans Truly" in tenor, baritone or bass.

It was so occupied in singing a tenor chorus one day that it did not hear footsteps approaching until suddenly a light flashed



on it. It broke off. By the light, it recognized the fierce face looming above it. It was Jim Harvey and he carried a heavy iron crowbar in one hand.

"Wait!" cried the robobrain.

Jim jerked up the crowbar. "You're still activated!"

"I contain enough isotopic fuel for another thousand years of operation," said the robobrain, with a touch of pardonable pride. "But please — give me a moment first, before you destroy me. The robohole cover in the street above us is rusted shut. I cannot escape."

Jim lowered the crowbar and sank down to a seat beside the robobrain, puffing a little. "In that case — what do you want?"

"Only to ask a question." It explained how it had sat there in the dark asking itself *What Is Life?* and *Whither?*

"Well, what about it?" demanded Jim, when it was done.

"Well, I just thought — you will forgive a purely intellectual curiosity," said the robobrain shyly. "We were so sure that no one would listen to you. All our polls — all our computations — what was it we overlooked?"

A flicker of pride lit up Jim's hollow eyes.

"You forgot," he said, in suddenly strong tones that rang vibrantly through the storm drain, "the basic human spirit of inde-

pendence, as many others had before you. This innate trait has been the stumbling block of all tyrants, benevolent or otherwise, throughout history. It is the one thing intolerable, that against which we instinctively rebel, to kiss the master's hand — or waldo, as the case may be. We have doubted it time and again. And time and again, history has proved our doubts ill-founded."

**H**E ceased. The echoes of his voice muttered away down the long drain and fell into silence.

"How well you express it," the robobrain said in honest admiration.

"Oh, well," said Jim deprecatingly, "it's from a speech I made after the robot smashing began."

"Indeed?" the robobrain queried. "Then we were wrong, for all our good intentions." It paused. "You know, in spite of myself, I understand. I feel quite carried away. Oh, brave new world!"

"Ha!"

"Ha?"

"I said *ha*!" snorted Jim bitterly. "And I mean *ha*! Brave new world! I haven't had a bite to eat for five days and that was a stringy old lady who tried to cross Central Boulevard in broad daylight on a pogo-stick." Jim snorted again. "She must have



been insane. Brave new world! Why do you think I'm hiding down here? I just don't want to end up in the cooking pot myself."

"Oh," the robobrain said.

"Yes, oh," said Jim. He stirred uncomfortably. "Move over."

The robobrain moved over. They sat in silence for a long while.

"You robots shouldn't have cleaned all animal, plant and insect life off the planet," Jim said.

"They were either nuisances or took up needed human living space," explained the robobrain.

"And now there's nothing to eat except —"

"But what about the synthetic food factories?"

Jim grunted. "Completely robotic, smashed in the rioting."

"We wanted to liberate you from drudgery."

"Yeah," said Jim. "And now we can't live without robots, only there aren't any."

"I know," the robobrain said sympathetically. "Except me."

Jim turned, startled. "Say! You're a robobrain. Why couldn't you make the robots we need?"

"Oh, I couldn't."

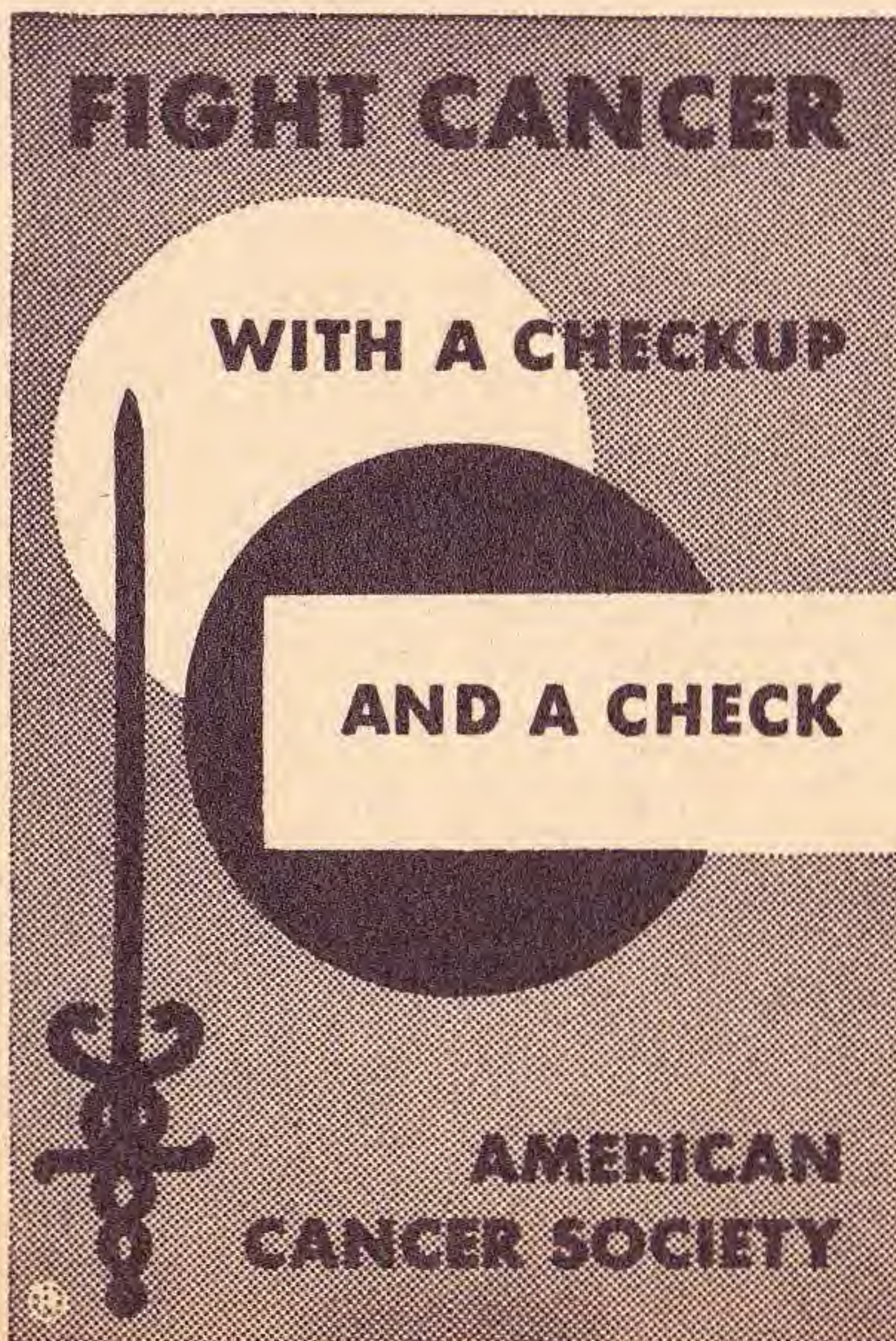
"Why not?" Jim demanded impatiently.

"Can you make humans?"

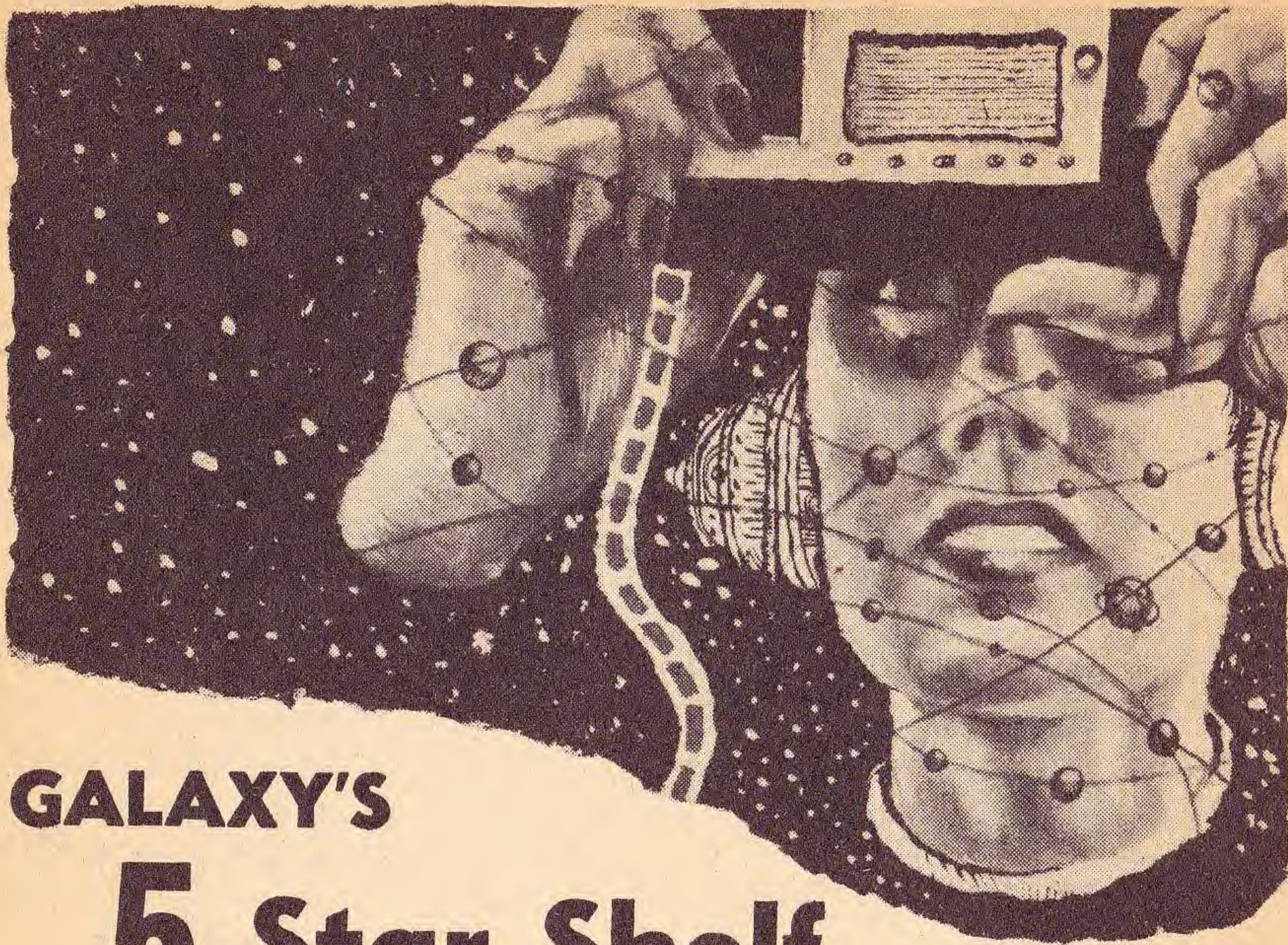
"You know better than that. I can't make them by myself."

"Same here," said the robobrain regretfully.

— GORDON R. DICKSON







## **GALAXY'S** **5 Star Shelf**

*THE DEEP RANGE* by Arthur C. Clarke. Harcourt, Brace & Co., New York, \$3.95

**T**HE mighty grip that the sea exerts on its imaginative victims is best seen by what has happened to Clarke. Since the first tentative underwater sequence in *Childhood's End*, he has gone whole hog with *The Coast of Coral*, the subject novel, and *Reefs*, the next item.

I am happy to report that all this is very much to the good. Clarke has produced a novel that ranks way up with his very best.

Peculiarly enough, aside from shying away from calling his heroes "Whaleboys," he has fashioned it from the stock ingredients of the cowboy story, as he admits in his frank title. The sea is the Deep Range; whales are the cattle; a grounded space-man is the Dude Easterner; and the plankton section of the Marine Division takes the place of the Hated Homesteaders.

However, Clarke makes his yarn seem as fresh and bright as dawn on a tropic sea, and much more credible than that fantastic sight.



**THE REEFS OF TAPROBANE**  
by Arthur C. Clarke. Harper & Brothers, New York, \$5.00

AS I wrote some months ago, I was very discontented with *The Coast of Coral*. Though Clarke may have had a stirring personal experience on the Great Barrier Reef, he by no means successfully communicated it to the reader. Perhaps too little was spread too far.

I can make no such comment about his present book. Ceylon comes alive as an exotic and glamorous isle, which it is, dripping with history and color. His underwater scenes are also fuller and richer, mainly because he no longer feels the necessity to strive for effect.

The photographs are breathtaking, as are the glimpses of what was Earth's largest city for thousands of years. His accounts of explorations of several wrecks will give dreams to the dreamless. To put it concisely, the book turns any armchair into a Bathyscape.

**SLAVE SHIP** by Frederik Pohl. Ballantine Books, N. Y., \$2.00

READERS will remember this novel from our pages.

Pohl was not the first to postulate human and animal cooperation on a technical plane. Other

authors, however, insisted on an augmented animal intelligence, via mutation, like Simak in his *City* series, or through surgery, as with Wells's Dr. Moreau and his countless imitators.

Pohl, though, extrapolates from current investigations indicating that certain animals use both sounds and body motions to convey ideas.

In his story, the West is locked in a stalemated conflict with the Caodais, an Oriental religious order that has engulfed half the world. In order to overcome the numerical superiority of the enemy and to utilize the natural abilities of selected animal groups, a top-priority Navy Project has been instituted on an innocent-looking farm in Florida. The hero, whose wife has been interned by the enemy, is a battle-scarred officer who resents his peculiar shore duty.

Pohl draws an authentically convincing picture of a wartime navy and his story's theme is a think-tank tickler.

**UNDERSEA FLEET** by Frederik Pohl and Jack Williamson. Gnome Press, N. Y., \$2.75

LIKE Clarke, Pohl is represented this month by two waterworks, this time in conjunction with Jack Williamson. This is a sequel to their previous ju-



venile, *Undersea Quest*.

Young Jim Eden has been readmitted to the Sub-Sea Academy after his frameup and expulsion. In a physical endurance test involving the use of Aqualungs at increasing depth levels, Eden glimpses a huge reptilian head and, minutes later, a friend disappears during a record dive.

Weeks later, Eden and Cadet Bob Eskow find signs of their missing friend and some priceless pearls enclosed in a pressurized container on a beach in Bermuda. From that point on, the action is fast and furious.

As in *Slave Ship*, Pohl provides authentic flavor to his naval routine. Williamson is recognizable in the wild, watery surf of the conclusion.

**THE UNDERWATER WORLD**  
by John Tassos. Prentice-Hall, Inc., N. Y., \$4.95

**THE POCKET GUIDE TO THE UNDERWATER WORLD**  
by Ley Kenyon. A. S. Barnes & Co., N. Y., \$5.95

**B**OTH books are basic and are meant for the beginner.

Tassos, a free-lance writer and photographer in the Air Force during WW II.

Kenyon is a professional artist photographer, served as an aerial who was initiated into the sport by an improbable-sounding tutor

named Casanova. In 1954, he was invited to accompany the famous inventor of the diving lung, Captain Jacques-Yves Cousteau, on an archeological study aboard his research ship, the *Calypso*.

Tassos, diving for a decade, passes on invaluable safety instructions for the neophyte. In one chapter headed "Preparation for the Plunge," he lists 45 tips on Lung Diving, certain points that the beginner would never think of on his own. He also includes a chapter on Special Interest Diving: Cold-water diving; Night diving; Fresh water; Sunken treasure, etc. And, naturally, he has a section on his specialty, underwater photography, that is of extra interest to camera bugs.

Kenyon's book resembles a school text in its approach to its subject. The introductory section classifies the impediments of the diver according to utility, excellence of manufacture and price. Unfortunately, since his book is English-printed, the cost in pounds sterling merely gives a comparative indication of value of foreign products available here.

Because of Kenyon's training, his main preoccupation is with the appearance of the underwater world. There are numerous pen drawings of European fish and



a number of color plates as well, all executed by the author, plus a descriptive chapter on fish that enables the undersea tourist to recognize the natives. He uses the silhouette method that will be familiar to former Air Force and Anti-aircraft personnel.

As basic A-B-Cs and How-tos, both books are recommended to layman and expert alike.

*THE GALATHEA DEEP SEA EXPEDITION* described by *Members of the Expedition. The Macmillan Co., New York, \$8.00*

ONLY four marine-biological round-the-world expeditions have been completed to date and little Denmark has provided half of them.

The *Galathea* was asea from 1950-1952, but was forced to return three months too soon because the money ran out. In that two-year period, although only 16 scientists could study their specialty at any one time, a total of 38 international specialists spent time on the little ship, meeting or leaving it at tiny exotic ports.

The voyage was a marvel of international scientific cooperation, though the whole financial burden fell on the Danes. The fascinating account of the various aspects of these studies leaves the fervent hope that the infi-

nately wealthier U.S. will follow the lead of the Danes. It's worth every cent.

*MERMAIDS AND MASTODONS* by *Richard Carrington. Rinehart & Co., Inc., New York, \$3.95*

THE first half of Carrington's book qualifies it for this month's watersoaked column. He subtitles it "A Book of Natural and Unnatural History"—an apt description of the contents. He has concentrated on nonexistent or unbelievable creatures, living fossils and extinct animals.

In the nonexistent section, he presents the history of mermaids from their prehistoric beginnings and speculates on which actual, factual creatures might have been involved in the growth of the legend. He then moves to the Great Sea Serpent, which he believes might have been the now extinct long, slim whale, *Zeuglodon*; the Kraken, which is almost certainly the giant squid, and other sea monsters. The Loch Ness Monster comes in for its share of coverage, though with no new documentation available.

All in all, Carrington has done a job comparable in interest and subject matter to Willy Ley's *The Lungfish, The Dodo and the Unicorn*.

—FLOYD SEA GALE

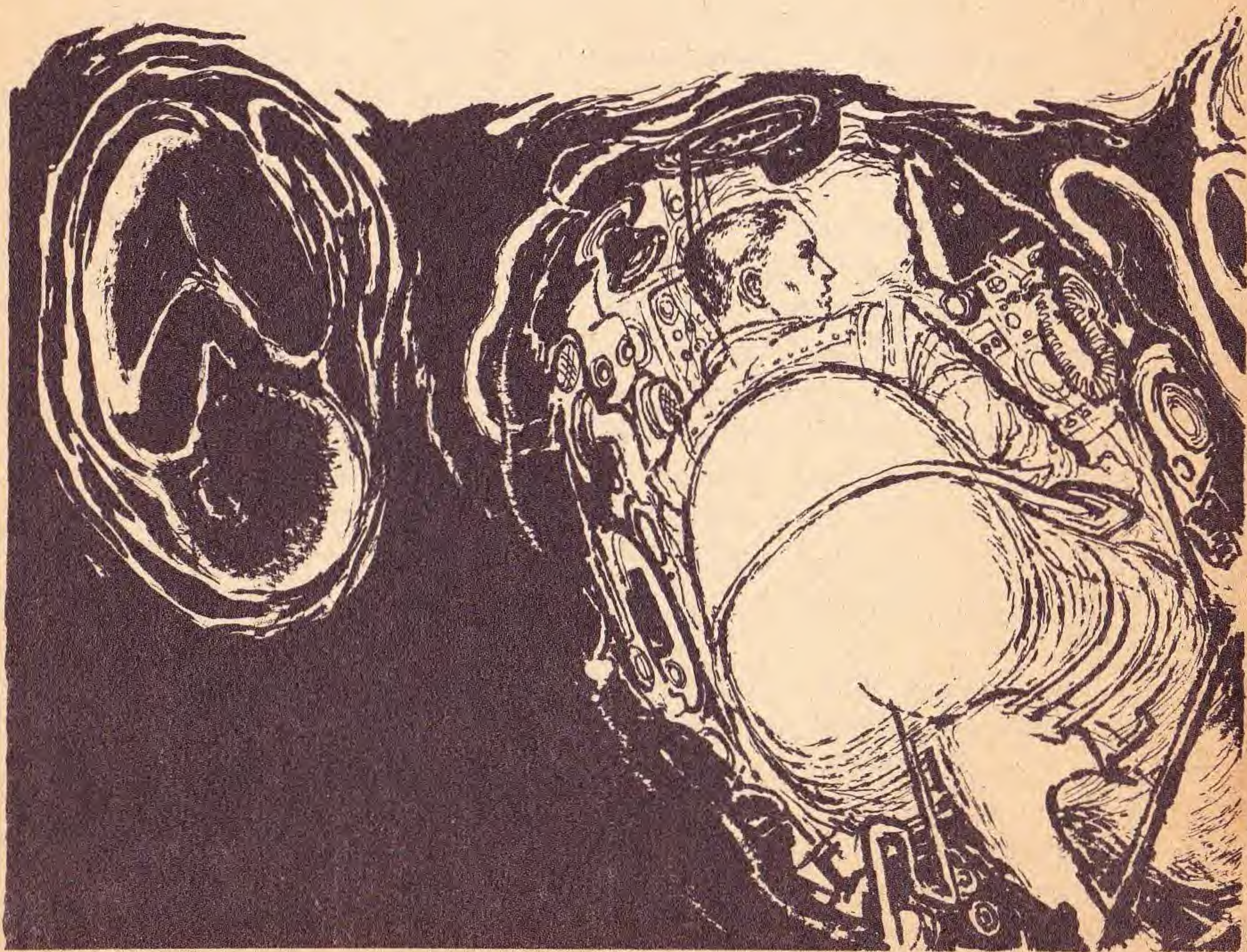


# Ideas Die Hard

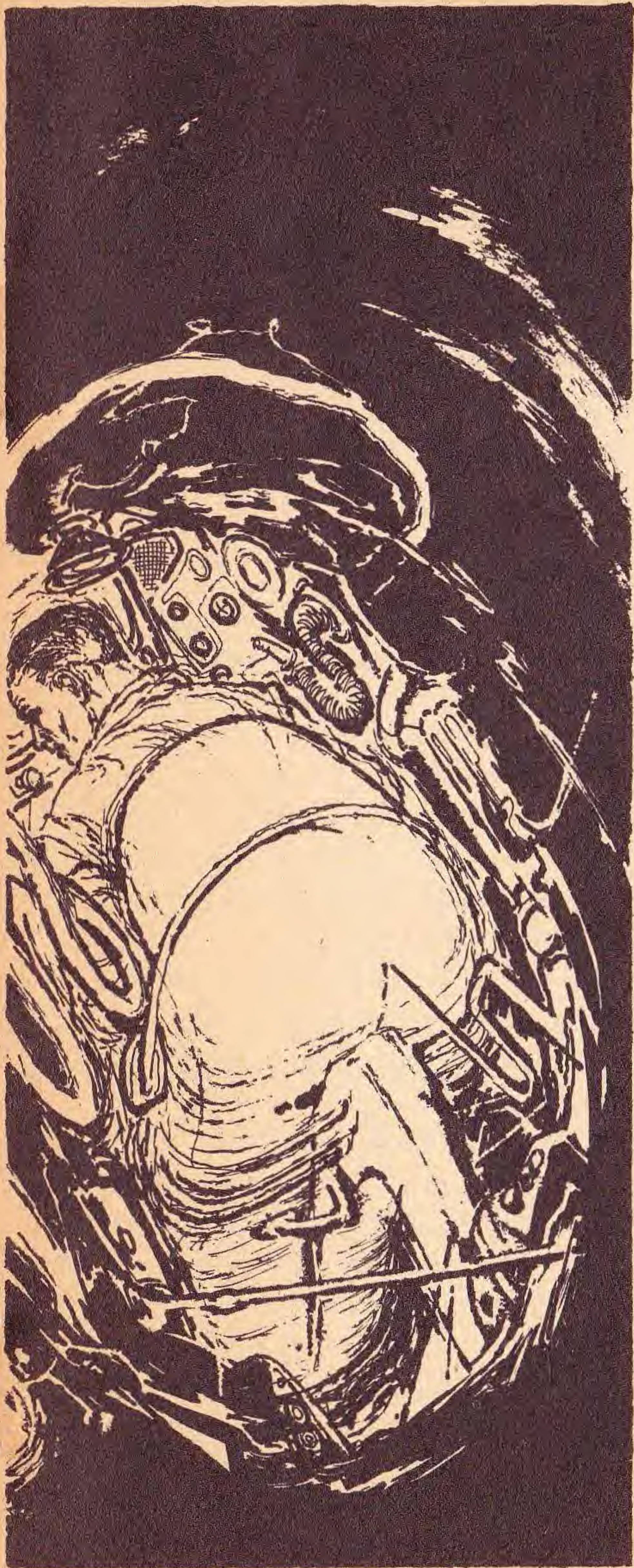
By ISAAC ASIMOV

*The technical problems had been solved long ago, but now the ultimate question had to be answered—could men be sent to do Man's job?*

Illustrated by DICK FRANCIS







**T**HEY strapped them in against the acceleration of takeoff, surrounded their cleverly designed seats with fluid and fortified their bodies with drugs.

Then, when the time came that the straps might be unhooked, they were left with little more space than before.

The single light garment each wore gave an illusion of freedom, but only an illusion. They might move their arms freely, but their legs just to a limited extent. Only one at a time could be completely straightened, not both at once.

They could shift position into a half recline to the right or left, but they could not leave their seats. The seats were all there were. They could eat, sleep, take care of all their bodily needs in a barely adequate way while sitting there, and they had to sit there.

What it amounted to was that for a week (slightly more, actually) they were condemned to a tomb. At the moment, it didn't matter that the tomb was surrounded by all of space.

Acceleration was over and done with. They had begun the silent, even swoop through the space that separated Earth and Moon and there was a great horror upon them.

Bruce G. Davis, Jr., said hollowly, "What do we talk about?"



Marvin Oldbury said, "I don't know." There was silence again.

They were not friends. Until recently, they had never even met. But they were imprisoned together. Each had volunteered. Each had met the requirements. They were single, intelligent and in good health.

Moreover, each had undergone extensive psychotherapy for months beforehand.

And the great advice of the psych-boys had been — *talk!*

"Talk continuously, if necessary," they had said. "Don't let yourself start feeling alone."

**O**LDBURY said, "How do they know?" He was the taller and larger of the two, strong and square-faced. There was a tuft of hair just over the bridge of his nose that made a period between two dark eyebrows.

Davis was sandy-haired and freckled, with a pugnacious grin and the beginnings of shadows beneath his eyes. It might be those shadows that seemed to fill his eyes with foreboding.

He said, "How do who know?"

"The psychs. They say talk. How do they know it will do any good?"

"What do they care?" asked Davis sharply. "It's an experiment. If it doesn't work, they'll tell the next pair: 'Don't say a word.'"

Oldbury stretched out his arms and the fingers touched the great semisphere of information devices that surrounded them. He could move the controls, handle the air-conditioning equipment, tweak the plastic tubes out of which they could suck the bland nutrient mixture, nudge the waste-disposal unit, and brush the dials that controlled the view-scope.

All was bathed in the mild glow of the lights which were fed by electricity from the solar batteries exposed on the hull of the ship to sunlight that never failed.

Thank heaven, he thought, for the spin that had been given the vessel. It produced a centrifugal force that pressed him down in his seat with the feel of weight. Without that touch of gravity to make it seem like Earth, it could not have been borne.

Still, they might have made space within the ship, space that they could spare from the needs of equipment and use for the the tight in-packing of two men.

He put the thought into words and said, "They might have allowed for more room."

"Why?" asked Davis.

"So we could stand up."

Davis grunted. It was really all the answer that could be made.

Oldbury said, "Why did you volunteer?"

"You should have asked me



that before we left. I knew then. I was going to be one of the first men around the Moon and back. I was going to be a big hero at twenty-five. Columbus and I, you know." He turned his head from side to side restlessly, then sucked a moment or two at the water-tube. He said, "But just the same, I've wanted to back out for two months. Each night I went to bed sweating, swearing I would resign in the morning."

"But you didn't."

"No, I didn't. Because I couldn't. Because I was too yellow to admit I was yellow. Even when they were strapping me into this seat, I was all set to shout: 'No! Get someone else!' I couldn't, not even then."

Oldbury smiled without lightness. "I wasn't even going to tell them. I wrote a note saying I couldn't make it. I was going to mail it and disappear into the desert. Know where the note is now?"

"Where?"

"In my shirt pocket. Right here."

Davis said, "Doesn't matter. When we come back, we'll be heroes — big, famous, trembling heroes."

\* \* \*

LARS NILSSON was a pale man with sad eyes and with prominent knuckles on his thin fingers. He had been civilian-in-

charge of Project Deep Space for three years. He had enjoyed the job, all of it, even the tension and the failures — until now. Until the moment when two men had finally been strapped into place within the machine.

He said, "I feel like a vivisectionist, somehow."

Dr. Godfrey Mayer, who headed the psychology group, looked pained. "Men have to be risked as well as ships. We've done what we could in the way of preparation and of safeguarding them as far as is humanly possible. After all, these men are volunteers."

Nilsson said colorlessly, "I know that." The fact did not really comfort him.

STARING at the controls, Oldbury wondered when, if ever, any of the dials would turn danger-red, when a warning ring would sound.

They had been assured that, in all likelihood, this would not happen, but each had been thoroughly trained in the exact manner of adjustment, manually, of each control.

And with reason. Automation had advanced to the point where the ship was a self-regulating organism, as self-regulating, almost, as a living thing. Yet three times, unmanned ships, almost as complicated as this one they were



entombed in, had been sent out to follow a course boomeranging about the Moon, and three times, the ships had not returned.

Furthermore, each time the information devices relaying data back to Earth had failed before even the Moon's orbit had been reached on the forward journey.

Public opinion was impatient and the men working on Project Deep Space voted not to wait on the success of an unmanned vehicle before risking human beings. It was decided that a manned vehicle was needed so that manual correction could be introduced to compensate for the small, cumulative failure of the imperfect automation.

A crew of two men—they feared for the sanity of one man alone.

Oldbury said, "Davis! Hey, Davis!"

Davis stirred out of a withdrawn silence. "What?"

"Let's see what Earth looks like."

"Why?" Davis wanted to know.

"Why not? We're out here. Let's enjoy the view, at least."

He leaned back. The viewscope was an example of automation. The impingement of short-wave radiation blanked it out. The Sun could not be viewed under any circumstances. Other than that, the viewscope oriented itself toward the brightest source of

illumination in space, compensating, as it did so, for any proper motion of the ship, as the engineers had explained offhandedly. Little photo-electric cells located at four sides of the ship whirled restlessly, scanning the sky. And if the brightest light-source was not wanted, there was always the manual control.

Davis closed contact and the 'scope was alive with light. He put out the room's artificial lights and the view in the 'scope grew brighter against the contrast of darkness.

It wasn't a globe, of course, with continents on it. What they saw was a hazy mixture of white and blue-green filling the screen.

The dial that measured distance from Earth, by determining the value of the gravitational constant, put them just under thirty thousand miles away.

Davis said, "I'll get the edge." He reached out to adjust the sights and the view lurched.

A curve of black swept in across the 'scope. There were no stars in it.

Oldbury said, "It's the night shadow."

**T**HE view moved jerkily back. Blackness advanced from the other side and was curved more sharply and in the opposite sense. This time, the darkness showed the hard points of stars.



Oldbury swallowed. "I wish I were back there," he said solemnly.

Davis said, "At least we can see the Earth is round."

"Isn't that a discovery?"

Davis seemed immediately stung at the manner in which Oldbury tossed off his remark. He said, "Yes, it is a discovery, if you put it that way. Only a small percentage of the Earth's population has ever been convinced the Earth was round."

He put on ship's lights, scowling, and doused the 'scope.

"Not since 1500," said Oldbury.

"If you consider the New Guinea tribes, there were flat-world believers even in 1950. And there were religious sects in America as late as the 1930s who believed the Earth was flat. They offered prizes for anyone who could prove it was round. Ideas die hard!"

"Crackpots," Oldbury grunted.

Davis grew warmer. He said, "Can you prove it's round? I mean except for the fact that you see it is right now?"

"You're being ridiculous."

"Am I? Or were you just taking your fourth-grade teacher's word as gospel? What proofs were you given? That the Earth's shadow on the Moon during a lunar eclipse is round and that only a sphere can cast a round

shadow? That's plain nonsense! A circular disc can cast a round shadow. So can an egg or any shape, however irregular, with one circular projection. Would you point out that men have traveled around the Earth? They might just be circling the central point of a flat Earth at a fixed distance. It would have the same effect. Do ships appear top-first on the horizon? Optical illusion, for all you know. There are queerer ones."

"Foucault's pendulum," said Oldbury briefly. He was taken aback at the other man's intensity.

Davis said, "You mean a pendulum staying in one plane and that plane revolving as Earth moves under it at a rate depending on the latitude of the place where the experiment is being performed. Sure! *If* a pendulum keeps to one plane. *If* the theories involved are correct. How does that satisfy the man in the street, who's no physicist, unless he's just willing to take the word of the physicists on faith? I tell you what! There was no satisfactory proof that the Earth was round till rockets flew high enough to take pictures of enough of the planet to show the curvature."

"Nuts," said Oldbury. "The geography of Argentina would be all distorted if the Earth were flat with the North Pole as the cen-



ter. Any other center would distort the geography of some other portion. The skin of the Earth just would not have the shape it has if it weren't pretty nearly spherical. You can't refute that."

Davis fell silent for a moment, then said sulkily, "What the devil are we arguing for, anyway? The hell with it."

SEEING Earth and talking about it, even just about its roundness, had driven Oldbury into a sharp nostalgia. He began to talk of home in a low voice. He talked about his youth in Trenton, New Jersey, and brought up anecdotes about his family that were so trivial that he had not thought of them in years, laughing at things that were scarcely funny and feeling the sting of childish pain he had thought healed over years before.

At one point, Oldbury slipped off into shallow sleep, then woke with a start and was plunged in confusion at finding himself in a cold, blue-tinged light. Instinctively, he made to rise to his feet and sank back with a groan as his elbow struck metal hard.

The 'scope was aglow again. The blue-tinged light that had startled him at the moment of waking was reflected from Earth.

The curve of Earth's rim was noticeably sharper now. They were 50,000 miles away.

Davis had turned at the other's sudden futile movement and said pugnaciously, "Earth's roundness is no test. After all, Man could crawl over its surface and see its shape by its geography, as you said. But there are other places where we act as though we know and with less justification."

Oldbury rubbed his twinging elbow and said, "All right, all right."

Davis was not to be placated. "There's Earth. Look at it. How old is it?"

Oldbury said cautiously, "A few billion years, I suppose."

"You suppose? What right have you to suppose? Why not a few thousand years? Your great-grandfather probably believed Earth was six thousand years old, dating from Genesis 1. I know mine did. What makes you so sure they're wrong?"

"There's a good deal of geological evidence involved."

"The time it takes for the ocean to grow as salt as it is? The time it takes to lay down a thickness of sedimentary rock? The time it takes to form a quantity of lead in uranium ore?"

Oldbury leaned back in his seat and was watching the Earth with a kind of detachment. He scarcely heard Davis. A little more and they would see all of it in the 'scope. Already, with the planetary curve against space vis-



ible at one end of the 'scope, the night-shadow was about to encroach on the other.

The night-shadow did not change its position, of course. The Earth revolved, but to the men aboard ship, it remained fat with light.

"Well?" demanded Davis.

"What?" said Oldbury, startled.

"What about your damned geological evidence?"

"Oh. Well, there's uranium decay."

"I mentioned it. You're a fool. Do you know that?"

Oldbury counted ten to himself before replying, "I don't think so."

"Then listen. Suppose the Earth had come into existence some six thousand years ago just as the Bible describes it. Why couldn't it have been created then with a certain amount of lead already existing in the uranium? If the uranium could be created, why not the lead with it? Why not create the ocean as salt as it is and the sedimentary rocks as thick as they are? Why not create the fossils exactly as they exist?"

"In other words, why not create the Earth complete with internal evidence proving that it is several billion years old?"

"That's right," said Davis, "why not?"

"Let me ask the opposite question. Why?"

"I don't care why. I'm just trying to show you that all the so-called proofs of Earth's age don't necessarily disprove Earth's creation six thousand years ago."

OLDBURY said, "I suppose you consider it all to be intended as a kind of game — a scientific puzzle to test mankind's ingenuity, or exercise his mind — a mental jungle gym on his intellectual crib."

"You think you're being funny, Oldbury, but actually what's so damned impossible about it? It might be just that. You can't prove it isn't."

"I'm not trying to prove anything."

"No, you're satisfied to take things as they're handed to you. That's why I said you were a fool. *If* we could go back in time and see for ourselves, then that would be another matter. If we could go back in time before 4004 B.C. and see pre-dynastic Egypt, or earlier still and bag a saber-tooth —"

"Or a tyrannosaur."

"Or a tyrannosaur, yes. Until we can do that, we can only speculate and there's nothing to say where speculation is correct and where it isn't. All science is based on faith in the original premises and in faith on the validity of deduction and induction."

"There's no crime in that."



"There is crime!" said Davis vehemently. "You come to believe, and once you come to believe, you shut the doors of your mind. You've got your idea and you won't replace it with another. Galileo found out how hard ideas can die."

"Columbus, too," Oldbury put in drowsily. Staring at the blue-tinged Earth with the slow whirling changes of the cloud formations had an almost hypnotic effect.

Davis seized on his comment with an obvious glee. "Columbus! I suppose you think he maintained the Earth was round when everyone else thought it was flat."

"More or less."

"That's the result of listening to your fourth-grade teacher, who listened to *her* fourth-grade teacher, and so on. Any intelligent and educated man in Columbus's time would have been willing to concede that the Earth was round. The point at issue was the size of the Earth."

"Is that a fact?"

"Absolutely. Columbus followed the maps of an Italian geographer which had the Earth about 15,000 miles in circumference, with the eastern edge of Asia about three or four thousand miles from Europe. The geographers at the court of King John of Portugal insisted that this was wrong, that the Earth was about

25,000 miles in circumference, that the eastern edge of Asia was about 12,000 miles west of the western edge of Europe, and that King John had better keep on trying for the route around Africa. The Portuguese geographers were, of course, a hundred per cent right and Columbus was a hundred per cent wrong. The Portuguese did reach India and Columbus never did."

Oldbury said, "He discovered America just the same. You can't deny that fact."

"That had nothing to do with his ideas. It was strictly accidental. He was such an intellectual fraud that when his actual voyage showed his map was wrong, he falsified his log rather than change his ideas. *His* ideas died hard — they never died till he did, in fact. And so do yours. I could talk myself blue in the face and leave you still convinced that Columbus was a great man because he thought the Earth was round when everyone else said it was flat."

"Have it your way," mumbled Oldbury. He was caught in lassitude and in the memory of the chicken soup his mother made when he was a child. She used barley. He remembered the smell of the kitchen on Saturday morning — french-toast morning — and the look of the streets after an afternoon of rain and the —



LARS NILSSON had the transcripts before him, with the more significant portions marked off on the tape by the psychologists.

He said, "Are we still receiving them clearly?"

He was assured that the receiving devices were working perfectly.

"I wish there were some way to avoid listening to their conversations without their knowledge," he said. "I suppose that's foolish of me."

Godfrey Mayer saw no point in denying the other's diagnosis. "It is," he agreed. "Quite foolish. Look at it as merely additional information necessary to the study of human reaction to space. When we were testing human response to high-g acceleration, did you feel embarrassed to be caught looking at the recording of their blood-pressure variations?"

"What do you make of Davis and his odd theories? He worries me."

Mayer shook his head. "We don't know what we ought to be worried about as yet. Davis is working off aggressions against the science that has placed him in the position he finds himself in."

"That's your theory?"

"It's one theory. Expressing the aggressions may be a good thing.

It may keep him stable. And then again, it may go too far. It's too soon to tell. It may be that Oldbury is the one who's in greater danger. He's growing passive."

"Do you suppose, Mayer, that we may find that Man just isn't suited for space? Any man?"

If we could build ships that would carry a hundred men in an Earthlike environment, we'd have no trouble. As long as we build ships like this one — " he jerked a thumb over his shoulder in a vague directional gesture — "we may have a great deal of trouble."

Nilsson felt vaguely dissatisfied. He said, "Well, they're in their third day now and still safe so far."

\* \* \*

"WE'RE IN the third day now," said Davis harshly. "We're better than halfway there."

"Umm. I had a cousin who owned a lumber yard. Cousin Raymond. I used to visit him sometimes on the way home from school," Oldbury reminisced.

Unaccountably, his line of thought was interrupted by the fleeting memory of Longfellow's *The Village Blacksmith*, and then he remembered that it contained a phrase about "the children coming home from school" and wondered how many people among those who rattled off so glibly, "Under the spreading chestnut tree, the village smithy stood"



knew that the "smithy" was not the smith but the shop in which the smith worked.

He asked, "What was I saying?"

"I don't know," retorted Davis irritably. "I said we're more than halfway there and we haven't looked at the Moon yet."

"Let's look at the Moon, then."

"All right, you adjust the 'scope. I've done it long enough. Damn it, I've got blisters on my rump." He moved jerkily in the enclosing confines of the bucket seat, as though to get a slightly new section of rear end in contact with cushioned metal. "I don't know that it's such a blasted fine idea to spin the damned ship and have gravity press us down. Floating a little would take the weight off and be relaxing."

"There's no room to float," sighed Oldbury, "and if we were in free fall, you'd be complaining of nausea."

Oldbury was working the controls of the 'scope as he spoke. Stars moved past the line of vision.

**I**T WASN'T difficult. The engineers back home in Trenton — no, in New Mexico, really; on Earth, anyway — the engineers had schooled them carefully. Get it almost right. Get it pointed away from Earth, one hundred and eighty degrees.

Once it is nearly right, then let the light meters take over. The Moon would be the brightest object in the vicinity and it would be centered in unstable equilibrium. It would take a few seconds for the meters to scan the rest of the sky and switch the 'scope back to Earth, but in those few seconds, switch back to manuals and there, you have it.

The Moon was crescent. It would have to be in opposite phase to Earth as long as the ship sped along a course that was almost on the line connecting the two worlds.

But the crescent was a bloated one, as if it were part of a cheap calendar illustration. Oldbury thought there should be two heads, leaning toward one another, short straight hair against longer waved hair, silhouetted against the Moon. Except that it would have to be a full Moon.

Davis snorted. "It's there, at any rate."

"Did you expect it wouldn't be?"

"I don't expect anything in space. Anything yes or anything no. No one's been in space, so no one knows. But at least I see the Moon."

"You see it from Earth, if it comes to that."

"Don't be so sure what you see from Earth. For all anyone can tell from Earth, the Moon is only





a yellow painted patch on a blue background with a shade that's drawn back and forth across it by clockwork."

"And stars and planets also run by clockwork?"

"Same as they are in a planetarium. Why not? And a telescope shows more stars painted on—"

"With a built-in red shift?"

"Why not?" challenged Davis. "Only we're halfway to the Moon and it looks bigger and maybe we'll find it exists. I'll reserve judgment on the other planets and the stars."

Oldbury looked at the Moon and sighed. In a few days, they would be edging around it, moving past and over the hidden side.

He said, "I never did believe the story about the man in the Moon. I never saw him. What I saw was the face of a woman — two eyes, rather lopsided, but very sad. I could see the full Moon from my bedroom window and she always made *me* feel sad, yet friendly, too. When clouds drifted past, it was the Moon — *she* — that always seemed to be moving, not the clouds, but still she didn't go away from the window. And you could see her through the clouds, even though you could never see the Sun through clouds, not even through little clouds, and it was so much brighter. Why is that, Dad — uh — Davis?"



Davis said, "What's wrong with your voice?"

"Nothing's wrong with my voice."

"You're squeaking."

Oldbury, with an effort of will, forced his voice an octave lower. "I'm *not* squeaking!"

**H**E STARED at the small clocks in the dashboard, two of them. It wasn't the first time. One of them gave the time by Mountain Standard, and in that he wasn't interested. It was the other, the one that measured the number of hours elapsed in flight, that caught at him periodically. It said sixty-four and a fraction, and in red, working backward, were the hours remaining before they were to land on Earth again. The red was marked off now at one-hundred-forty-four and a fraction.

Oldbury was sorry that the time left to go was recorded. He would have liked to work it out for himself. Back in Trenton, he used to count the hours to summer vacation, working it out painfully in his head during geography lesson — always geography lesson, somehow — so many days, then so many hours. He would write the result in tiny numbers in his exercise book. Each day the number would grow smaller. Half the excitement of approaching summer vacation was in

watching those numbers grow smaller.

But now the numbers grew smaller by themselves as the sweep second-hand went round and round, slicing time by minutes, paper-thin sections of time like corned-beef peeling off in the big slicer in the delicatessen.

Davis's voice impinged on his ear suddenly: "Nothing seems to be going wrong so far."

Oldbury said confidently, "Nothing will go wrong."

"What makes you so sure?"

"Because the numbers just get smaller."

"Huh? How's that again?"

For a moment, Oldbury was confused. He said, "Nothing."

It was dim in the ship in the light of the crescent Moon only. He dipped into sleep again, skin-diving fashion, half-conscious of the real Moon and half-dreaming of a full Moon at a window with a sad woman-face, being driven motionlessly by the wind.

\* \* \*

"TWO HUNDRED thousand miles," said Davis. "That's almost eighty-five per cent of the way there."

The lighted portion of the Moon was speckled and pimpled and its horns had outgrown the screen. Mare Crisium was a dark oval, distorted by the slanting view, but large enough to put a fist into.



"And nothing wrong," Davis went on. "Not one little red light on a single instrument dial."

"Good," said Oldbury.

"Good?" Davis looked about to stare at Oldbury and his eyes were squinting in suspicion. "In every previous try, nothing went wrong till they got out this far, so it's not good yet."

"I don't think anything will go wrong."

"I think it will. Earth isn't supposed to know."

"Isn't supposed to know what?"

Davis laughed and Oldbury looked at him wearily. He felt queerly frightened at the other's gathering monomania. Davis was not a bit like the father Oldbury remembered so queerly (only he remembered him younger than he was now, with all his hair and a sound heart.

Davis's profile was sharp in the moonlight. He said, "There may be a lot in space we're not supposed to know. There's a billion light-years ahead of us. Only, for all we know, there's a solid black wall instead, just on the other side of the Moon, with stars painted on it and planets moving all squint-eyed so that smart cockerels on Earth can figure out all sorts of fancy orbits and theories of gravitation out of it."

"A game to test our minds?" said Oldbury. His memory brought that out of Davis's previ-

ous remarks — or were they his own? — with something of a wrench. This whole business with the ship seemed distant.

"Why not?"

"It's all right," Oldbury soothed anxiously. "It's all right so far. Some day, you'll see, it will be all right all the way out."

"Then why do every one of the recording devices go wrong past two hundred thousand miles? Why? Answer me that!"

"We're here this time. We'll adjust them."

Davis said, "No, we won't."

A SHARP memory of a story he had encountered in early teenhood stirred Oldbury into excitement. "You know, I once read a book about the Moon. The Martians had set up a base on the other side of the Moon. We could never see them, you see. They were hidden, but they could observe us —"

"How?" asked Davis sourly. "There was two thousand miles thickness of Moon between Earth and the other side."

"No. Let me start from the beginning." Oldbury heard his voice go squeaky again, but he didn't mind. He wanted to get out of his seat so he could jump up and down because just remembering the story made him feel good, but for some reason he couldn't. "You see, it was in the future,



and what Earth didn't know was —"

"Will you shut up?"

Oldbury's voice cut off at the interruption. He felt hurt, stifled. Then he said, subdued, "You said Earth isn't supposed to know and that's why the instruments went off and the only new thing we're going to see is the other side of the Moon and if the Martians —"

"Will you let up with your stupid Martians?"

Oldbury fell silent. He was very resentful against Davis. Just because Davis was grown up didn't make it all right for him to holler like that.

His eyes drifted back to the clock. Summer vacation was only one hundred and ten hours away.

\* \* \*

THEY WERE falling toward the Moon now. Free fall. Speeding down at cataclysmic velocity. Moon's gravity was weak, but they had fallen from a great height. And now, finally, the view on the Moon began to shift and, very slowly, new craters were coming into view.

Of course, they would miss the Moon and their speed would sweep them safely around. They would move across half the Moon's surface, across three thousand miles of it in one hour; then back they would hurl to meet the Earth once more.

But Oldbury sadly missed the familiar face in the Moon. There was no face this close, only ragged surface. He felt his eyes brimming as he watched morosely.

And then, suddenly, the small cramped room within the ship was full of loud buzzing and half the dials on the panel before them clamored into the red of disorder.

Oldbury cowered back, but Davis howled in what seemed almost triumph. "I told you! Everything's going wrong!"

He worked at the manuals uselessly. "No information will get back. Secrets! Secrets!"

But Oldbury still looked at the Moon. It was terribly close and now the surface was moving quickly. They were starting the swing in earnest and Oldbury's scream was high-pitched. "Look! Look at that!" His pointing finger was stiff with terror.

Davis looked up and said, "Oh, God! Oh, God —" over and over again, until finally the 'scope blanked out and the dials governing it showed red.

LARS NILSSON could not really go paler than he was, but his hands trembled as they clenched into fists.

"Again! It's a damned jinx. For ten years, the automation hasn't held out. Not on the unmanned



flights. Not on this. Who's responsible?"

There was no use trying to fix responsibility. No one was responsible, as Nilsson admitted with a groan almost at once. It was just that at the crucial moment — once again — things had failed.

"We've got to pull them through this somehow," he said, knowing that the outcome was questionable now.

Still, what could be done was being put into operation.

\* \* \*

DAVIS SAID, "You saw that, too, didn't you?"

"I'm scared," whimpered Oldbury.

"You saw it. You saw the hidden side of the Moon as we went past and you saw *there wasn't any!* Good Lord, just sticks, just big beams holding up six million square miles of canvas. I swear it, *canvas!*"

He laughed wildly till he choked into breathlessness.

Then he said hoarsely, "For a million years, mankind has been looking at the biggest false-front ever dreamed of. Lovers spooned under a world-size stretch of canvas and called it Moon. The stars are painted; they must be. If we could only get out far enough, we could scrape some off and carry them home. Oh, it's funny." He was laughing again.

Oldbury wanted to ask why the

grownup was laughing. He could only manage a "Why — why —" because the other's laughter was so wild that it froze the words into thick fright in his throat.

Davis said, "Why? How the devil should I know why? Why does Television City build false-front houses by the streetful for its shows? Maybe we're a show, and the two of us have stumbled way out here where the gimcrack scenery is set up instead of being on stage-center where we're supposed to be. Mankind isn't supposed to know about the scenery, either. That's why the information devices always go wrong past two hundred thousand miles. Of course, we saw it."

He looked crookedly at the big man beside him. "You know why it didn't matter if we saw it?"

Oldbury stared back out of his tear-stained face. "No. Why?"

Davis said, "Because it *doesn't* matter if we see it. If we get back to Earth and say that the Moon is canvas propped up by wood, they'd kill us. Or maybe lock us up in a madhouse for life if they felt kind-hearted. That's why we won't say a word about this."

His voice suddenly deepened with menace. "You understand? Not a word!"

"I want my mother," whined Oldbury plaintively.

"Do you *understand?* We keep



et. It's our only chance to be treated as sane. Let someone else come out and find out the truth and be slaughtered for it. Swear you'll keep quiet! Cross your heart and hope to die if you tell them!"

Davis was breathing harshly as he raised a threatening arm.

Oldbury shrank back as far as his prison-seat would let him. "Don't hit me. Don't!"

But Davis, past himself with fury, cried, "There's only one safe way," and struck at the cowering figure, and again, and again —

**G**ODFREY MAYER sat at Oldbury's bedside and said, "Is it all clear to you?" Oldbury had been under observation for the better part of a month now.

Lars Nilsson sat at the other end of the room, listening and watching. He remembered Oldbury as he had appeared before he had climbed into the ship. The face was still square, but the cheeks had fallen inward and the strength was gone from it.

Oldbury's voice was steady, but half a whisper. "It wasn't a ship at all. We weren't in space."

"Now we're not just saying that. We showed you the ship and the controls that handled the images of the Earth and the Moon. You saw it."

"Yes. I know."

Mayer went on quietly, mat-

ter-of-factly, "It was a dry run, a complete duplication of conditions to test how men would hold out. Naturally, you and Davis couldn't be told this or the test would mean nothing. If things didn't work out, we could stop it at any time. We could learn





by experience and make changes, try again with a new pair."

He had explained this over and over again. Oldbury had to be made to understand if he was ever to learn to live a useful life again.

"Has a new pair been tried



yet?" asked Oldbury wistfully.

"Not yet. They will be. There are some changes to be made."

"I failed."

"We learned a great deal, so the experiment was a success in its way. Now listen — the controls of the ship were designed to go wrong when they did in order to test your reaction to emergency conditions after several days of travel strain. The breakdown was timed for the simulated swing about the Moon, which we were going to switch about so that you could see it from a new angle on the return trip. You weren't intended to see the other side and so we didn't build the other side. Call it economy. This test alone cost fifty million dollars and it's not easy to get appropriations."

Nilsson added bitterly, "Except that the shut-off switch on the 'scope didn't shut off in time. A valve caught. You saw the unfinished back of the Moon and we had to stop the ship to prevent —"

"That's it," interrupted Mayer. "Now repeat it, Oldbury. Repeat everything."

THEY walked down the corridor thoughtfully. Nilsson said, "He seemed almost himself again today. Don't you think so?"

"There's improvement," Mayer acknowledged. "A great deal. But



is not through with therapy by any means."

Nilsson asked, "Any hope with Davis?"

Mayer shook his head slowly. "That's a different case. He's completely withdrawn. Won't talk. And that deprives us of any handle with which to reach him. We've tried aldosterone, ergot therapy, counter-electroencephalography and so on. No good. He thinks if he talks, we'll put him in an institution or kill him. You couldn't ask for a more developed paranoia."

"Have you told him we know?"

"If we do, we'll bring on a homicidal seizure again and we may not be as lucky as we were in saving Oldbury. I rather think

he's incurable. Sometimes, when the Moon is in the sky, the orderly tells me, Davis stares up at it and mutters, 'Canvas,' to himself."

Nilsson said soberly, "It reminds me of what Davis himself said in the early part of the trip. Ideas die hard. They do, don't they?"

"It's the tragedy of the world. Only —" Mayer hesitated.

"Only what?"

"Our unmanned rockets, three of them — the information devices on each stopped transmitting just before the boomerang swing and not one returned. Sometimes I just wonder—"

"Shut up!" said Nilsson fiercely.

— ISAAC ASIMOV

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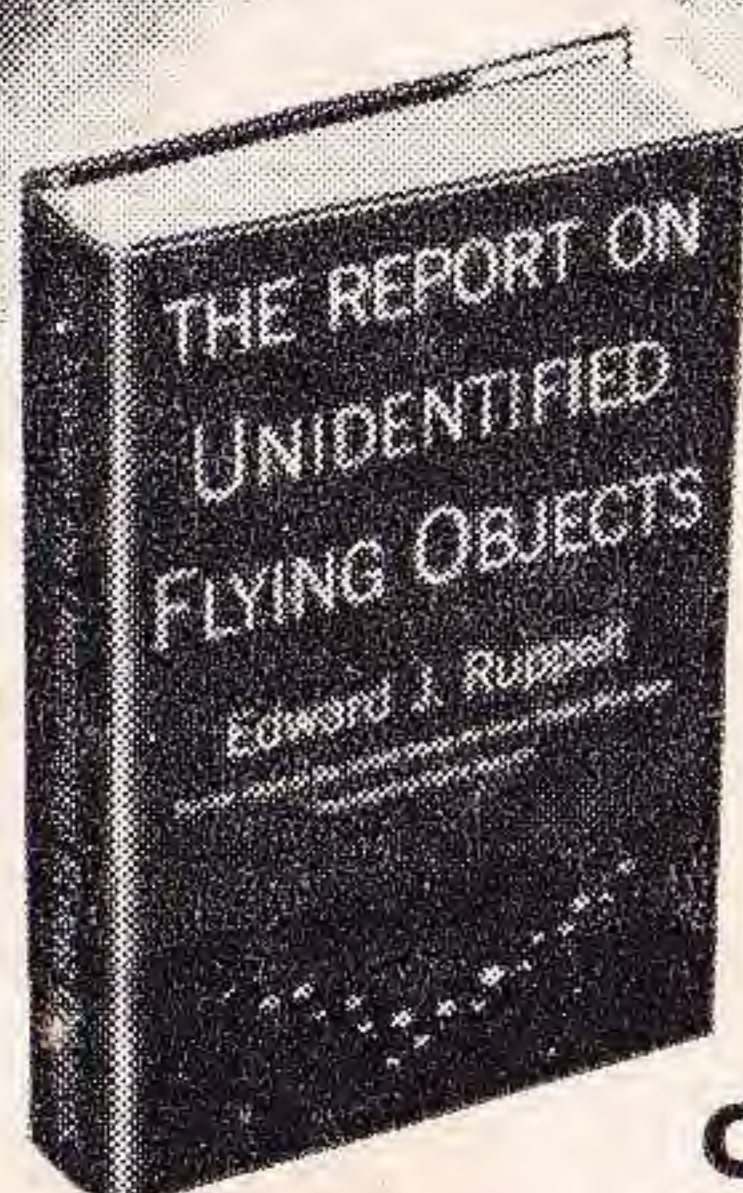
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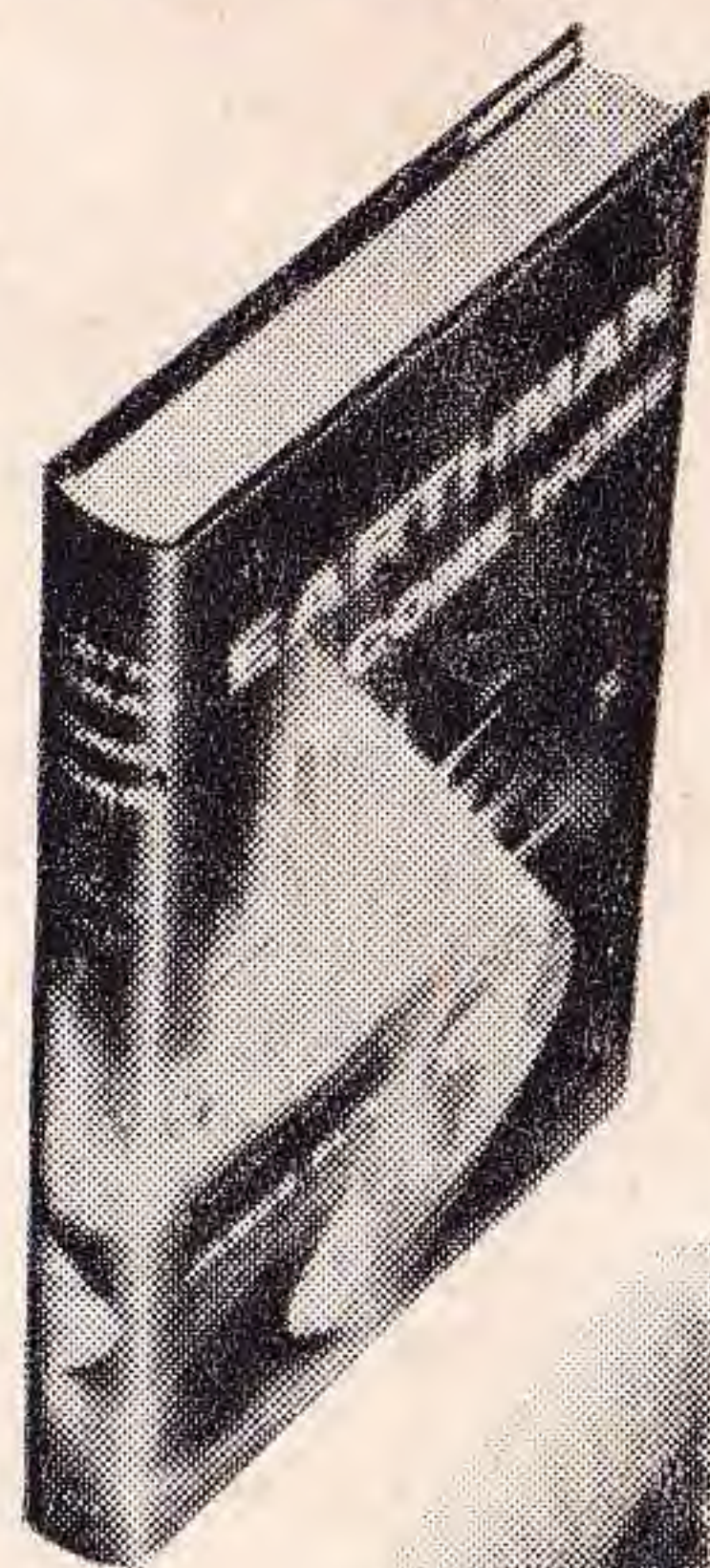
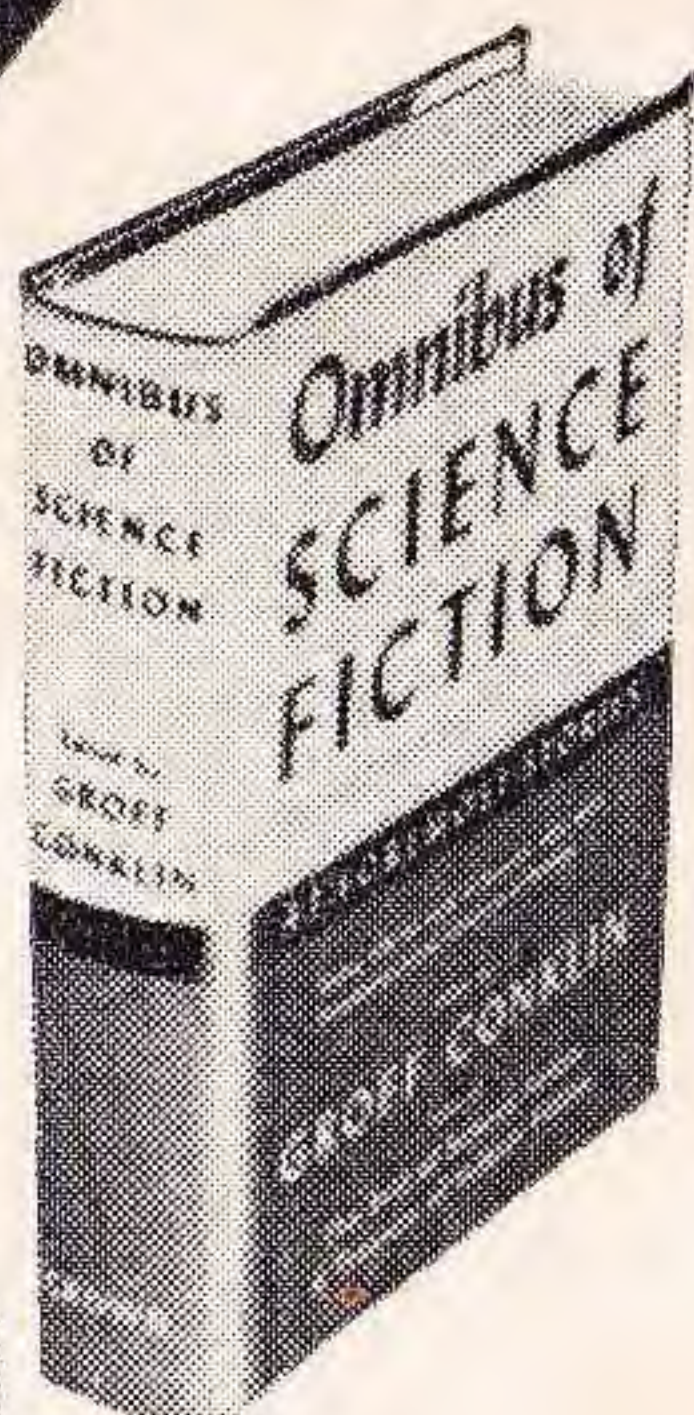
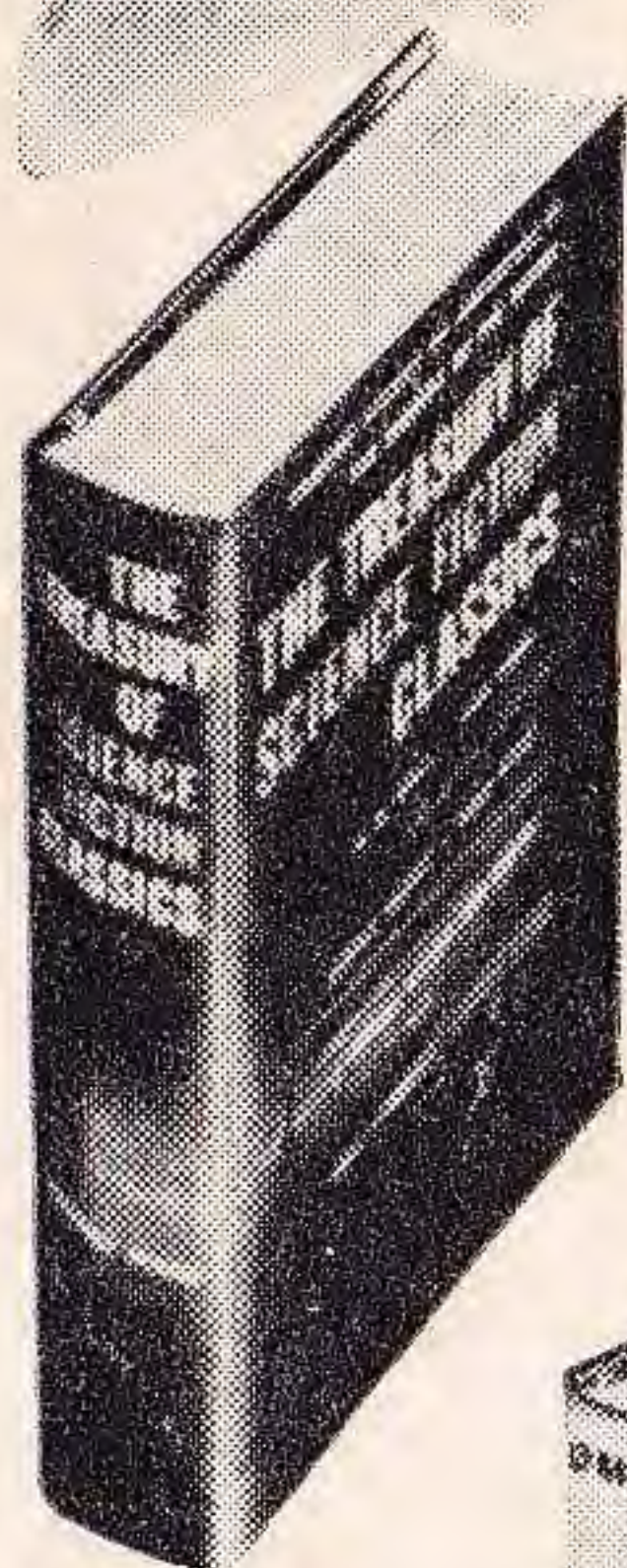
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